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ABSTRACT

Designed for use by college administrators and staff, as well as by boards of trustees and legislators, this seven-part report outlines an approach to assessing institutional effectiveness which utilizes mission-based, student-centered indicators of success. Resources to assist practitioners in conducting such an assessment are also identified. The first section provides an overview of the assessment approach presented in subsequent chapters, and includes a discussion of the importance of having an up-to-date mission statement in order to utilize the approach. The following five sections of the report focus in turn on the community college missions of: (1) transfer; (2) career preparation; (3) basic skills and developmental education; (4) continuing education and community service; and (5) access. Each of these sections includes a review of the clients served, the programs generally employed to serve them, and a guide to assessing such programs. Also provided are a list of assessment questions and data sources which can be used to answer such questions. The final section of the report provides detailed answers to 11 specific questions and issues often raised by institutions attempting to undertake an effectiveness assessment. Appendix A provides a guide to selected resources for implementing an institutional assessment process and a list of suggested readings on specific methodologies. Appendix B comments on the issues an institution should consider in selecting or using standardized assessment instruments. (GFW)

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Assessing Institutional Effectiveness in Community Colleges

Edited by
Don Doucette
and Billie Hughes

1990

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Foreword

A decade ago Peter Drucker's *Managing In Turbulent Times* indicated that the hallmark of the future was turbulence. Leadership tasks for such times would be to ensure an institution's structural strength, its capacity to adapt to sudden change, and its ability to avail itself of new opportunities.

During the decade of the 1980s, there has been increasing focus on assessment and student outcomes as indicators of institutional effectiveness in community colleges. State-level concern over the quality of postsecondary education has rapidly emerged as a national movement. A majority of the states now have formal initiatives labeled assessment, and numerous studies have been produced through the efforts of organizations such as the Education Commission of the States, the National Governor's Association, and regional accreditation associations. At the federal level, the effectiveness movement has been stimulated by the Secretary of Education's "Procedures and Criteria for Recognition of Accrediting Agencies."

The League for Innovation in the Community College is contributing greatly to the rapidly expanding field of assessing institutional effectiveness. The authors represented in this monograph relate the issues of institutional effectiveness to the various domains of community college performance with specific recognition of our mission statements. These domains include college transfer, career preparation, basic skills and developmental education, and continuing education and community service functions, as well as issues of access and student development.

Now our challenge is to move forward and implement the type of assessment strategies outlined in this volume. We have long passed the issue of whether to assess our effectiveness and we are now grappling with the issue of "how." The League's efforts and those of others have brought the assessment movement to where it should have been in the first place—at the local institutions.

Resources to assist colleges in developing an assessment program are becoming more readily available as demonstrated by this work and that of others. The American Association of Community and Junior Colleges has taken a leadership role by incorporating the assessment of institutional effectiveness into its national agenda. This agenda includes the work of the Futures Commission, the contributions of Project Cooperation, and the efforts of the AACJC Consortium for Institutional Effectiveness and Student Success in the Community College. These collective undertakings, however, will only bear fruit to the degree to which individual colleges are successful in improving and documenting their effectiveness in performing their missions.

As we implement campus-based assessment programs, it is also important that we maintain our fundamental focus on student success. As you review this volume, you will note that the various indicators of effectiveness are all student-centered and relate to the teaching and learning process. Also, institutional effectiveness in a community college must be identified with the individual college's mission, emphasizing that the real test of quality is whether or not the institution fulfills its mission, goals, and objectives.

The term "institutional effectiveness" frequently has been used as an umbrella concept for interrelated issues including quality control, accountability, student outcomes, student success, assessment, and various measures of organizational efficiency and vitality. If institutional effectiveness is to be achieved, there

must be some sense of what it is and what it would look like. Increasingly, the literature on both staff development and institutional effectiveness focuses on three major elements: 1) a shared understanding of the mission within the organization; 2) development of the effectiveness of each individual staff member; and 3) creation of an organizational climate that supports the mission by supporting and nourishing the competence and vitality of the staff.

At stake is the vitality and strength of the human spirit to adapt, persist, and flourish in an unstable, fast-paced, and often ambiguous environment. The assessment of institutional effectiveness offers us the opportunity and means to strengthen our colleges and, as a consequence, better assist our students and communities in meeting the challenges of this decade and beyond.

Paul E. Kreider
President
Mt. Hood Community College

[Editors' note: Paul Kreider is a leader in the community college institutional effectiveness movement, having founded, in 1988, the Consortium for Institutional Effectiveness and Student Success in the Community College, which under his leadership has become an affiliated council of AACJC. President Kreider has written on the subject of institutional effectiveness and was elected to the board of directors of AACJC in 1990. The editors and authors of this monograph are honored to have their work introduced by a foreword from Paul Kreider.]

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Finally, the board extends its appreciation to its partners in this and many other development efforts—the IBM Corporation, the Educational Testing Service, and the American College Testing Program—whose support has made possible the distribution of this document to the presidents of every community college in the United States and Canada.

This monograph is testimony to the power of collaborative, collective efforts. The board recognizes all who have contributed to its development and publication and hopes that it might assist community colleges throughout the United States and Canada to respond to issues related to institutional effectiveness.

Peter A. Spina
President, League for Innovation in the
Community College and
President, Monroe Community College

Preface

Accountability and assessment are not new concerns for institutions of higher education. Yet only recently have community colleges taken the initiative to assist in defining the criteria by which their effectiveness is assessed. Attempting to capitalize on the opportunity presented by calls from regional accrediting organizations and other publics for community colleges to demonstrate their institutional effectiveness, the League for Innovation in the Community College established an advisory committee in June of 1987 to explore how community colleges might respond to effectiveness issues.

Two distinct initiatives resulted from deliberations of the advisory committee. First, nearly 800 college leaders attended a national conference on "Institutional Effectiveness in the Community College" in Charlotte, North Carolina, hosted by Central Piedmont Community College, in July 1988. The second initiative was the formation of a task force to develop guidelines for assessing institutional effectiveness that focused on the concerns and special circumstances of community colleges.

The task force agreed early on that the missions of community colleges were substantively different from those of other institutions of higher education and that these client-centered missions needed to be the focus of efforts to determine the effectiveness of community college efforts.

The approach to assessing institutional effectiveness outlined in the following chapters represents over two years of deliberation, writing, and revision by a task force with both expertise in testing and measurement, research and evaluation, and instructional design, and experience in academic affairs, student development, and other areas of community college activity. The principal writers and editors of this monograph are identified with chapters that most clearly bear their imprint, yet all contributed substantially to the whole.

Members of the task force offer this mission-based approach to assessing institutional effectiveness in community colleges with the hope that it will assist these colleges, to which they have devoted their professional lives, not only to become better institutions but also to be evaluated more appropriately and more fairly by their various internal and external constituents. This document is intended to assist community college administrators, faculty, and staff to implement appropriate programs to assess institutional effectiveness within their own colleges. The description of the principal missions, clients, and programs of community colleges may also be used to educate key external audiences, such as interested legislators, state board officials, and business and community leaders, about the important and different role of community colleges in the overall system of higher education.

Mike Rooney
Maricopa Community Colleges

Bill Tucker
Dallas County Community
College District

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An Approach to Assessing Institutional Effectiveness

Purpose

This monograph outlines an approach for assessing institutional effectiveness that can be both usefully and fairly applied to community colleges and identifies resources to assist practitioners in conducting such an assessment.

The fundamental perspective is that assessing the effectiveness of any institution should be based upon a systematic evaluation of how effective it is in performing its explicitly stated missions. Assessment of the institutional effectiveness of a community college, then, is a systematic evaluation of how well such an institution performs not only the missions it has in common with other community colleges but also the missions peculiar to the needs of its local constituents and community.

This monograph provides a rationale and a process for assessing the effectiveness of community colleges in performing their missions that reflects their specific character and circumstances. An underlying premise is that community colleges are not well-served by assessment processes designed for four-year colleges and universities that ignore the substantial differences between types of institutions. Thus, while this monograph is, in part, a reaction to difficulties that community colleges have historically had in responding to requests to document the effectiveness of their efforts using inappropriate measures and models, it also responds to the opportunity that community colleges now have to determine the criteria by which their various publics will evaluate them.

Perspective

Issues involved in assessing institutional effectiveness are not new. They have long been addressed by private and public institutions of higher education, as well as institutions and agencies outside of education. For the most part, answers to questions regarding effectiveness were informal: informal in the manner in which they were used, informal in the processes by which the answers were derived, and informal in the way answers were communicated to others. Students, faculty, and community members who came in contact with a college or university usually discussed their impressions with family, friends, and relatives; word-of-mouth reputations and casual assessments were either the downfall or the foundation for the survival of institutions. Granted, some institutions were mismanaged or poorly financed and thus failed, but it is arguable that the fates of many institutions were determined by relatively informal institutional effectiveness assessment measures. Frequently, the only formal measure was undertaken by regional accrediting agencies, which traditionally focused on process rather than outcome measures.

However, assessment of institutional effectiveness has become more rational, more public, more systematic, and more consistently based upon data and other objective measures. Recently, the focus of such assessments has been on student outcomes, which is a significant departure from process measures historically used by all regional educational accrediting agencies. The shift to an emphasis on outcome measures, in addition to the continued use of appropriate process measures, is a positive direction for community colleges because such a focus allows accountability and effectiveness to be assessed according to criteria that can be established, in part, by faculty, administrators, and other college constituents.

While most would agree that institutions should assess their effectiveness, less agreement exists as to what should be assessed and what constitutes acceptable and appropriate measures. Peter Ewell, senior associate, National Center for Higher Education Management Systems, places this problem in its simplest terms: assessing institutional effectiveness is a "comparison of results achieved to goals intended." For community colleges, this directive translates into assessing an institution's effectiveness in terms of its performance of its stated missions—which presumably represent the explicit and consensual goals of the college. Of course, this also means that institutions lacking a clear sense of purpose will have a difficult time determining their effectiveness.

For community colleges, the issues related to effectiveness are often quite different from those of four-year colleges or universities. Although much of higher education is currently being criticized, open-door, two-year colleges are especially prone to criticism from those who use traditional, but sometimes inappropriate, standards for evaluating institutional effectiveness. Fundamental differences between the missions of community colleges and universities have been ignored too often and have resulted in community colleges being judged by university expectations. For example, providing access to all constituents in a service area, not just a select group seeking degrees, is a primary concern of nearly all community colleges. Thus, while the number of degrees conferred in a given time period may be a critical measure of effective performance for a four-year institution, more appropriate measures for a community college are likely to be the number of students who successfully transfer, the number of students who find satisfying employment, or the number of students who master basic literacy skills.

The issue of effectiveness is complicated because community colleges are to a large degree reflections of the localities they serve. Because no two communities are identical, no two community colleges have exactly the same missions, even though most have their primary missions in common. Therefore, the measures used by each community college to assess its effectiveness can legitimately be designed to reflect each college's specific purposes, as determined by the consensus of its key constituents.

Community colleges now have an historic opportunity to overcome attempts to assess their effectiveness with inappropriate measures. Outcomes-based assessment allows community colleges to demonstrate their effectiveness by developing and implementing criteria appropriate for evaluating their performance of their separate missions. This monograph is a specific response to the opportunity.

Organization and Audience

This document is organized around the premise that community colleges should implement programs to assess their effectiveness in performing their various missions using outcomes-based measures for each mission. It presumes that community colleges take seriously their stated missions and that they possess or can develop the expertise required to monitor objective measures or indicators for each mission.

The remainder of this chapter considers the examination of institutional mission statements, and the following chapters contain pertinent reviews of the four key missions of most community colleges—transfer, career education, basic skills

and developmental education, and continuing education and community service. Then, the access mission, a superordinate mission for most community colleges, is considered as it relates to assessing institutional effectiveness. Each of these five chapters introduces the mission in the context of assessment issues, describes the principal clients served by each mission, and details the major programs offered by most community colleges for these clients. Finally, each chapter concludes with a series of questions and corresponding data sources that could form the basis for an assessment of an institution's performance of the mission.

The chapters on mission are intended for two different audiences. First, the descriptions provide a context in which internal audiences can view their own college's efforts, with specific guidance for implementing an institutional effectiveness assessment program available in the questions and data sources sections. Equally important, interested external audiences, including members of boards of trustees, legislators, state officials, and business and community leaders, may use the outlines of the major missions, clients served, and programs offered by most community colleges as an overview of the issues involved in assessing the effectiveness of these unique and often misunderstood institutions.

Following this focused discussion of community college missions are chapters that address general issues involved in implementing institutional effectiveness programs and responding to calls to demonstrate accountability, as well as appendices that identify key methods and resources to support assessment programs.

Caveats

A few caveats are in order. Appropriate missions for community colleges have been debated almost as long as the institutions have been in existence. The four principal missions described in this document are intended to represent the major categories of programs and services provided to community college clients. While the terms used to describe these missions and the activities included in each are subject to discussion and suggestions for alternative groupings, together these incorporate the great majority of community college efforts. Similarly, the broad range of programs and services described in the mission category termed "access" could just as easily be described as the "student development" or "student success" mission. However, the term" access mission" was chosen because it best describes an intended outcome of this range of activities and reflects the most distinctive characteristic of community colleges.

Finally, while the approach recommended is a mission-by-mission examination, it is understood that the final result must be a holistic assessment of an institution's effectiveness in meeting its own expectations and those of its publics. Analysis by mission category is intended to assist community colleges to develop appropriate criteria and to implement realistic measures for each of their major functions. However, the boundaries of most missions are blurred, and programs and clients overlap among them. An overall institutional assessment combines the results of examining effectiveness in performing individual missions; such a broad assessment may even take into account the fact that some missions may be higher institutional priorities than others.

Mission Statements

Because this monograph is organized to support a mission-by-mission examination of a community college's effectiveness, institutions without an explicit and up-to-date mission statement probably cannot employ this approach. Admittedly, mission statements have too often been treated as glowingly vague statements of the motherhood-and-apple-pie intentions of a college or university, generally confined to catalog copy filler or filed with institutional charters and by-laws. However, mission statements can be vital documents that reflect a college's explicit and focused purposes, which are examined and updated regularly by a consensual process involving all of its major constituents.

The assessment approach described in this monograph requires such a mission statement. In some cases, a college may find it helpful to begin an assessment of its institutional effectiveness with the development or re-examination of its mission statement. The process for doing either has much in common with strategic planning and results in a straightforward statement of the priority activities of an institution. The following describes the steps of such a process.

1. ***Review Current Institutional Activities and Mission.*** The development of a new mission statement or the review of an existing one begins with a comprehensive listing of all current institutional activities and a comparison of the list with the current mission statement. Many institutions add functions over time that may not be reflected in their mission statements. Any planned future activities should be added to the list, which should then be organized into major groups of activities with a summary statement or category title heading each subsection.
2. ***Determine Future Directions.*** A mission statement sets direction for an institution. Therefore, strategic planning processes, such as environmental scanning, values clarification, and resource allocation studies, can be used to assist in developing a vision of the desired future of the college that should be reflected in its mission statement. Such forward-looking thinking should result in additional intended activities to incorporate into the master list of activities.
3. ***Review Lists and Categories.*** Once developed, the lists and categories of activities should be reviewed by a broadly representative group to insure that all activities in which the college is or is proposing to become involved are included. Such a review can take place at various levels; for instance, initial review might be limited to a manageable number of key college staff that represent all college functional areas, as well as selected representatives of special interests and college constituents.
4. ***Insure Involvement in Determining Priorities.*** Collegewide involvement, starting with the firm and enthusiastic endorsement of the president and other college leaders, is essential to creating a statement that both reflects and inspires the college's goals and values. The process of determining the priority activities to be reflected in the mission statement can take place in stages. For instance, an initial review by a smaller group could eliminate the least feasible of the activities, but the process should move towards inclusion of the broad college community. This critical step of determining college priorities can be accomplished using a variety of methods, including formal surveys, task forces or committees focusing on certain areas or representing specific interests, or even a convocation or convention of the entire college.

5. ***Write a Draft Statement.*** A draft mission statement should then be written to reflect the consensus reached in the previous steps about the college's priority activities. Most mission statements are usually one or two pages in length, with an introduction expressing the college's principal commitments followed by a priority list of the major activities or functions. In addition, some colleges also publish other related materials with a mission statement, including a brief history of the college, pertinent descriptive information, statements of institutional values, outlines of functional organizations, a description of student characteristics, lists of intended student outcomes, and vision statements describing ideal operating environments and institutional responses.
6. ***Seek Consensus.*** Once drafted, a mission statement needs to be reviewed as broadly as feasible by all important college constituents with the intention to develop a broad-based consensus. All comments, editorial suggestions, and requests for additions and deletions need to be considered—even if ultimately rejected as unrepresentative of the college community—in developing subsequent drafts of the statement for review and revision.
7. ***Adopt the Statement Formally.*** After careful review and editing to reflect the greatest possible consensus of the college community, the board of trustees should formally act to accept the mission statement as official policy of the college.
8. ***Disseminate.*** After formal adoption, a mission statement should be disseminated to all college constituents in appropriate ways. Key publications, such as the college catalog, master plan, and annual report, should include it as an appropriate expression of the college's intentions and purpose. It should guide major decision making and important college processes, especially strategic planning and resource allocation.
9. ***Review and Update.*** Finally, once adopted, a college's mission statement should be reviewed and updated regularly, especially to reflect major changes in college emphases or developments in the external environment to which the college intends to respond. At a minimum, a college should conduct a formal process to review and update its mission statement every three to five years.

While this brief section is not a complete discussion of the development and review of community college mission statements, a college must explicitly articulate its purposes as a prerequisite to any serious attempt to determine how effectively it is achieving them.

John Losak
Miami-Dade Community College

The Transfer Mission

The transfer mission is perhaps the most traditional role of community colleges; it is the collegiate function that includes community colleges among institutions of higher education. The transfer mission is also the one function in which community colleges and four-year colleges and universities most clearly overlap. What might appear to some to be duplication has caused considerable misunderstanding about the nature of the community college role.

Community colleges are still viewed by some as "junior colleges," fostering assumptions that, as junior versions of their senior university counterparts, they simply provide the same freshman and sophomore-level courses for similar eighteen to twenty year-old students. As a result, the success of community colleges in performing their transfer mission has tended to be assessed by university standards. Community colleges are often judged inappropriately by the rate at which all students earn an associate's degree two years after initial enrollment, and a bachelor's degree after four years. However, because community colleges enroll such diverse students, rather than stable cohorts of eighteen year-olds ready to progress through programs as full-time students, these institutions have always fared badly by comparison on such measures.

Preparing students to transfer to four-year colleges and universities is only one of the major missions of community colleges, and the courses that comprise most typical "transfer programs" enroll many students who do not intend to earn a degree or to transfer to a senior institution. Further complications arise because, while the transfer function once was restricted to providing liberal arts courses in the first two years of a baccalaureate degree program, today the mission also includes programs in the sciences, advanced technologies, and a range of subjects in preparation for transfer in these fields.

So, the transfer mission, while once the key role of the first junior colleges, has become a complicated role of the modern comprehensive community college that is more often misunderstood than fully appreciated, even when it is being accomplished well.

Clients

The term "transfer student" is traditionally associated with those first-time college students who enroll in community colleges with the intention of transferring to a four-year college or university to earn a bachelor's degree. However, there are several distinct client groups that might be included in the broad category of transfer students, and even a larger number of student groups who enroll in courses designed to transfer to four-year institutions but have no intention to pursue a bachelor's degree. These include the following groups:

- ***Traditional Transfer Students.*** These eighteen to twenty year-old students remain the largest single age cohort for most comprehensive community colleges, despite the rising numbers of nontraditional and older students heralded by the higher education press and national media. While the average age of students in most community colleges is about twenty-eight, the median age is closer to twenty-four, and the mode age is eighteen.

  These first-time college students are the most likely to enroll in a

community college in order to transfer to a university. They are likely to enroll in introductory courses in mathematics, English and communications, the social sciences, the sciences, and other courses that are directly equivalent to courses in the universities they plan to attend. These students most closely approximate traditional college students and tend to be enrolled full-time. However, many of those who complete substantial coursework at the community college do not intend to earn an associate's degree prior to transferring, unless specific articulation agreements offer an incentive to do so.

- ***Career Preparation Students.*** An increasing number of students, either intending to transfer to four-year colleges and universities or simply enrolled in courses designed to transfer to these institutions, are primarily seeking to prepare for a career. Students enrolled in two-year vocational and technical programs not only take some general education core courses that transfer to universities, but an increasing number of them continue to pursue degree studies in four-year institutions after completing their two-year career preparation programs. Formal agreements between community colleges and four-year institutions to articulate programs of study in the sciences and technologies that lead to a bachelor's degree are becoming more widespread.
- ***Reverse Transfer Students.*** Adding to the complexity are students who begin their college studies in four-year institutions but, for a variety of reasons, transfer to community colleges to complete their first two years of study. A portion of these students are enrolled simultaneously in both a community college and a university.

  Another group of students complete bachelor's degrees, often in the arts and sciences, and then enter community colleges to earn credentials to qualify them for specific career opportunities. Paralegal, nursing, and other business and allied health programs, as well as some advanced technical programs, enroll the largest share of these students.
- ***Casual Students.*** Courses designed for transfer enroll a host of students attracted to the community college for personal enrichment, skills refreshment, and a variety of other goals other than preparation for transfer or degree achievement. Courses in art history, music appreciation, and introductory courses in the sciences and social sciences often appeal to these casual students.

These different student groups underscore the fact that community college courses designed to fulfill the transfer function, in fact, enroll a host of students with a wide variety of educational and personal objectives.

Programs

The transfer mission for community colleges is generally defined as a commitment to provide freshman and sophomore-level courses that meet requirements for a bachelor's degree at most four-year colleges and universities. Program offerings vary, though the following list of traditional core curricula is the primary way that a community college fulfills the transfer function:

- ***Core Courses.*** Core courses in mathematics, English and communications, introductory sciences, social sciences, history, the fine arts, foreign

language, and physical education comprise the bulk of the transfer function in most community colleges. All of these courses are designed to be the specific equivalents of courses in the four-year colleges and universities that their students are likely to attend. Two-year colleges focus particular attention on what will transfer to the public universities in the state. A few states have instituted the efficient practice of common course numbering for all public institutions. In other states, two-year and four-year public institutions negotiate articulation agreements to specify exactly which courses transfer and meet baccalaureate degree requirements.

Unlike career preparation programs that lead to an associate's degree in specific fields, such as dental hygiene, business data processing, and commercial art, community colleges generally do not offer transfer programs in specific disciplines. The emphasis is on courses, specified combinations of which lead to a nonspecific associate of arts degree. However, students preparing to transfer tend to accumulate courses that meet the requirements of a bachelor's degree program in specific disciplines in four-year colleges and universities, rather than pursue an associate's degree in community colleges. Many transfer students bypass the associate's degree unless there is a specific incentive to earn it.

- ***Articulated Technical Programs.*** In theory, undergraduates do not choose major fields until the end of their sophomore years, so the first two years of college studies tend to be general rather than discipline-specific. However, with the increasing knowledge base of many scientific and technical disciplines, "two plus two" transfer programs have been developed in which students follow a prescribed course of study in a two-year college that articulates specifically with a bachelor's degree program at a four-year institution. These programs, though relatively new, are offered in such areas as computer science and some applied business and technology fields, and in a few cases, in the sciences.
- ***High School Programs.*** In the last decade there has been a rapid rise in the number of programs developed by community colleges to offer college-level core courses to capable high school students in local school districts. These dual-credit programs give high school students the opportunity to complete high school requirements while earning college credits in introductory courses, thus providing a headstart to their higher education. These are the same freshman-level core courses offered as part of the college's transfer function, but taught under different arrangements, including delivered on the high school campus and use of qualified high school teachers as adjunct college faculty.
- ***Alternative Delivery Methods.*** Community colleges have continually sought to provide access to their programs to the largest possible number of eligible students in their service areas. This attempt has been spurred by the development of a host of new computing and telecommunications technologies. As a result, many of the core courses included in the transfer mission have been provided by alternative delivery methods, including by telecourse and other transmission to remote sites and by using independent study materials on various media, such as audio tape and compact disc, videotape and videodisc, and computer software. These programs are the modern equivalent of correspondence courses. However, transfer courses

delivered by alternative delivery methods are expected to adhere to the same academic standards of quality and rigor as those taught in traditional classroom and laboratory settings.

Despite the differences in clientele and the variations in how different institutions provide freshman and sophomore-level courses, the bottom line for community colleges in performing their transfer function is that they provide students with academic experiences equivalent to those available at four-year colleges and universities. Coursework must be similar in content, quality, and rigor, and other experiences must be provided to enrich students' cognitive, psycho-social, and affective development. It is the latter areas that community colleges are most criticized for failing to provide developmental experiences for their students beyond those provided in the classroom. A major difficulty that community colleges have is that they deal with a great variety of students, many of whom are not primarily college students, in an open, commuter-oriented environment that is generally beyond their ability to influence.

Rather, community college efforts at providing strong transfer programs have concentrated on providing directly equivalent academic courses, negotiating clear and effective articulation agreements to insure ease of transfer for their students, and providing informative academic advising and educational planning to assist students to achieve their transfer and degree achievement goals.

Assessing Effectiveness

Comprehensive review of effectiveness of the transfer mission requires assessment on several levels, including what programs and services are provided as well as the outcomes of these programs across a range of student needs. Such a comprehensive review of the transfer mission of a community college should involve measurement of the following outcomes:

- Achieving educational outcomes
- Accomplishing transfer
- Succeeding as a transfer student
- Articulating courses and programs

The following key questions and data sources can assist a college to conduct a comprehensive assessment of its effectiveness in performing its transfer mission.

A Guide to Assessing Transfer

Questions	Data Sources
Achieving Educational Outcomes	
1. To what extent do students who transfer understand the content in the general education core?	1. Pre- and post-tests (see Appendix B for a discussion of value added); exit exams or essays; "capstone" courses; grade reports from senior institutions
2. To what extent do students master content in their areas of specialization?	2. Pre- and post-tests; exit exams or essays; grade reports from senior institutions; interviews with faculty from the transfer institution
3. To what extent do transfer students exhibit growth and maturity in the noncognitive/ affective domain?	3. Standardized assessments of personality development, moral or ethical values, and interpersonal relations; surveys of former students
4. Are individuals satisfied with the overall instruction, delivery, and content of courses, programs, and services—including alternative delivery methodologies?	4. Surveys/interviews of current and former students
Accomplishing Transfer	
5. What is the college's transfer rate—reasonably measured?	5. Enrollment reports and student profile data; transcripts; student surveys; reports from transfer institutions

Comment: Determining how to calculate the transfer rate has far-reaching implications for assessing the effectiveness of a college's transfer mission. A number of groups and researchers have proposed various methods; as of this writing, some of these are under consideration for adoption as a national standard.

The key elements in determining a fairly measured transfer rate are the following two: 1) the definition of the population of students to be used as the base number of potential transfers—first-time students, full-time students, total credit hours earned at the college; 2) the definition of students considered to have transferred—credit hours completed at a four-year institution within a specified time. For instance, The Center for the Study of Community Colleges at the University of California, Los Angeles, has suggested the following definition for transfer rate: the percent of first-time college students who, within five years of enrolling in a community college, complete at least twelve credit hours there, and subsequently enroll in at least one course at a four-year institution.

6. To which recipient four-year colleges and universities do students transfer?	6. Transcripts; reports from transfer institutions; student surveys

A Guide to Assessing Transfer

Questions	Data Sources
Succeeding As a Transfer Student	
7. At what rates do transfer students make progress (in terms of credit hours earned) toward their bachelor's degrees, and how do these rates compare with "native" university students?	7. Transcripts; transfer institution records; follow-up surveys of transfer students
8. What grades do transfer students earn, and how do these grades compare with those earned by native university students?	8. Transcripts; transfer institution records; follow-up surveys of transfer students
9. What percentage of transfer students successfully complete their bachelor's degrees? How long does it take? In what majors? And how do their degree achievement rates compare to native university students?	9. Transcripts; transfer institution records; follow-up surveys of transfer students

Comment: Studies of the comparative academic progress, performance, and degree achievement of community college transfer students and their native university counterparts require complicated analyses conducted in close cooperation with transfer universities. Most published studies have selected comparable cohorts of transfer and native students and followed them for the equivalent of five years from initial college enrollment. This can be done retrospectively using existing historical student records, or studies can follow the progress of current student cohorts. In either case, extreme care must be taken in the complicated task of selecting comparable community college transfer and native university cohorts given their different enrollment patterns.

Articulating Courses	
10. What percentage of students' total credit hours are accepted by the transfer institution?	10. Transcripts; transfer institution records; follow-up surveys of transfer students; state reports
11. Are there barriers to articulation, and, if so, what are they?	11. Articulation agreements; interviews with students, advisors, and articulation officers
12. Do students who complete "two plus two" programs at the community college transfer as juniors to the university?	12. Transcripts; transfer institution records; follow-up surveys of program completers
13. Are credit hours earned in dual-credit high school and community college programs accepted by the transfer university?	13. Transcripts; transfer institution records; follow-up surveys of students exercising the dual-credit option

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Kirkwood Community College

The Career Preparation Mission

Preparing students for new careers, career change, and career advancement has long been a cornerstone mission of the community colleges. This mission—whether referred to as career, occupational, vocational, or technical education—provides a valued and needed service to individual students, to the community, and, increasingly, to the nation struggling to compete effectively in the emerging global economy.

Through career programs, community colleges provide tangible economic benefit to their communities and regions, primarily in terms of a trained work force. In addition to effective technical and career training, community colleges strive to educate students in a broader sense so that they will be able to respond and adapt to the rapidly changing work place.

Career education in community colleges has been criticized on a number of counts, including that it leads to low-paying and limited jobs. However, many such criticisms fail to appreciate that community colleges provide some of the most technically advanced training available anywhere in a variety of new and emerging fields. As well, community colleges have become the largest publicly supported provider of job training and retraining, including contract training programs customized for local business and industry and offered on-site. Recognition of the importance of this community college mission is increasing rapidly among politicians, business and labor leaders, and the general public.

Because community colleges focus on meeting the specific needs of their communities, the programs and services they offer will vary in different regions of the country to reflect local and regional economies. Nowhere is this tendency more apparent than in the different kinds of career programs offered by various community colleges. Therefore, college officials work closely with their constituents in their communities to determine the programs and services that their colleges should provide to fulfill the career preparation mission.

Clients

Students served by the career preparation mission have diverse goals and needs. The most common educational objectives include learning skills for a first full-time position, updating skills to meet the needs of a changing job market, enhancing skills for promotion, retraining for career change, and preparing for transfer to a four-year program.

Clients for career preparation in community colleges vary greatly in age, motivations, needs, skill preparation, and other characteristics. The most common categories of students include the following:

- ***Traditional Age Students.*** Eighteen to twenty year-old students entering college after graduating from high school remain key clients for career preparation programs, and many have been designed to met their needs and expectations. These individuals are often full-time students and part-time employees. They frequently are interested in part-time work-study opportunities, cooperative arrangements, or other employment related to their career training while enrolled. However, their objectives are generally either full-time employment in their chosen career field or preparation

for transfer to a four-year college or university in their field.

- ***Working Students.*** Older students, employed full-time, enroll in career programs for several reasons. Many wish to update skills for their current position, enhance their current job performance, increase the efficiency and effectiveness of their work, or acquire additional skills that would facilitate promotion or career advancement. Other older students desire retraining for a career change. In most cases, these individuals will participate as part-time students.
- ***Employees of Local Business and Industry.*** These students enter career preparation programs to achieve educational or training objectives similar to those of other working students, but their motivations for doing so are usually dictated by their employers, who have arranged with the college to provide specific programs or courses. There is enormous diversity in the arrangements by which community colleges provide such training, but these tend to be determined by the perceived needs of the employer rather than the employees.
- ***Members of Labor Organizations.*** Some trainees in organized labor programs attend career preparation courses at community colleges as part of their formal apprenticeship training. These students sometimes enroll in regular college courses related to their chosen fields; frequently, however, they enroll in customized classes that are restricted to union members and jointly sponsored by the union and the community college.
- ***The Underemployed.*** Career programs are also designed to serve adults who may be unemployed, underemployed, or employed part-time. These individuals may be unemployed or underemployed due to economic conditions, the changing industrial environment, or other circumstances outside their control. Included in this category are target groups such as re-entry women, single heads-of-households, workers affected by lay-offs, or recent immigrant groups.
- ***Older Adults.*** Finally, a slowly increasing clientele for career programs are older adults. Many retirees seek retraining for meaningful work activity in their later years; others are motivated by the desire or need to supplement their retirement benefits or other sources of income.

In any case, community college career programs provide valuable education and training for those preparing for their first careers, as well as for individuals who want to upgrade or re-enter full- or part-time employment. Clients may be either full- or part-time students, generally depending on their employment status and the immediacy of their need to reenter a full-time career position.

Programs

With such disparate client goals and needs, career programs in community colleges must be designed to serve a wide variety of students with differing educational needs and objectives. To meet these diverse needs, many community colleges offer career programs that provide different levels of training, tailored to the various educational objectives of their students. Increasingly, career preparation programs utilize different formats, delivery methods, and institutional arrangements. Some of the most common formats include the following:

- ***Degree Programs.*** Traditional career preparation programs lead to an associate of applied science degree, though the degree may also be called an associate of technical arts or, less frequently, an associate of science. Such programs combine a strong emphasis on career preparation course work with a smaller core of courses in communications, mathematics, and other general education areas.
- ***Career Ladders.*** Career preparation that leads to an associate's degree is often organized so that a student can earn certificates that represent specific levels of skill attainment along the way. In this way, students can certify their competence in specified skills even if they do not complete an entire degree program. This organization is sometimes referred to as "career ladders." Certificates are offered at different levels, depending on the extent of course work involved, the most common being one that signifies approximately one full year of college work. These programs meet the needs of students who need only a limited number of courses to accomplish their educational objectives, or whose circumstances require that they enter the work force prior to completing a degree program. Community colleges are becoming increasingly accommodating to students who leave a program "with marketable skills" but with no formal degree or certificate.
- ***Contract training.*** One of the areas of greatest growth for community colleges is the provision of training for the employees of local business or industry. Such training is often customized to meet the specific needs of the employer and provided on a contract basis. The training is generally not offered for credit, unless existing degree programs and courses that meet the specific needs of the employer can be provided to employees . Such training is often conducted at the work site, sometimes in order to include preparation using the specific technologies needed.
- ***Apprenticeship Training Programs.*** Some labor organizations, responding to studies that show community colleges are the preferred places of study for union workers, offer some or all of their formal apprenticeship training on college campuses. Such programs are designed to meet the requirements of the union certification process but are often developed and offered in a collaborative arrangement between the union and the college.
- ***"Two plus two" Programs.*** Community colleges also are collaborating with high schools to provide carefully articulated career preparation programs, known as "two plus two" or "tech prep" programs. These arrangements recognize the potential for overlap with secondary school vocational-technical programs and construct programs of study that assist students to move from secondary to postsecondary degree programs seamlessly. Also, community colleges are increasingly developing such programs with four-year colleges and universities, with students earning a bachelor's degree at the end of the articulated program of study.
- ***International Training Programs.*** A new, but burgeoning, area for community colleges is technical training designed specifically for students from other countries. Many nations, particularly developing countries, are sending students to community colleges in the United States to receive training that is unavailable in their own countries, especially in health, agricultural, and technical fields. This training is sometimes provided in the native language of the students, who often live on campus, in a special

facility for the program, or with host families. Alternatively, some community colleges contract with other countries to provide technical training in the host country so that it is the teacher, rather than the students, who lives in a foreign land.

Community colleges generally consider broad, general education critical for their students. This includes proficiency in written and oral communication, computational skills, and an understanding of history, social institutions, science and technology, and the arts. Another essential skill is the ability to work cooperatively with others in the workplace. The degree to which such a curriculum is feasible in technical and career programs will vary depending on students' (or employers') objectives. For example, while this core curriculum is a necessary component of all associate degree programs, only a portion of these courses may be included in certificate programs that require 30 credit hours or less to complete. Training provided by contract to a local business may include no broadening course work at all.

Because of the diverse needs of career students, colleges usually provide a range of support services to supplement these instructional programs, including reliable assessment of students' level of preparation, aptitude, and need for remediation. Counseling services, career planning and placement services, coperative education programs, and a variety of other student and auxiliary services often complement instructional offerings to provide comprehensive career preparation.

Assessing Effectiveness

Most community colleges conduct some assessment of the effectiveness of their career preparation programs; most states are very interested in this mission and require regular reports of graduation and job placement rates for programs they support. However, fewer community colleges conduct comprehensive assessment of their career preparation mission in a way that speaks to the multiple clientele served because state reporting requirements tend to focus on programs designed for traditional students preparing for their first full-time jobs.

Comprehensive review of effectiveness of the career mission requires assessment on several levels. This includes determination of what programs and services are provided as well as the outcomes of these programs and services across the range of client and community needs. A comprehensive assessment of the effectiveness of a community college's career preparation mission should involve measurement of the following outcomes:

- Achieving educational outcomes
- Fulfilling student goals
- Meeting employer needs
- Contributing to economic development

The following key questions and data sources can assist a college to conduct a comprehensive assessment of its effectiveness in performing its career preparation mission.

A Guide to Assessing Career Preparation

Questions	Data Sources
Achieving Educational Outcomes	
1. Are students attaining course and/or program outcomes?	1. Competency testing; transfer rates to four-year institutions; follow-up surveys/ interviews with employers on job performance and retention; licensure and certification exams
2. Are students successfully completing programs?	2. Program completion rates; program GPAs; assessments of program-exit competencies (apart from course examinations)
3. What are students' success rates on standardized licensing examinations? (e.g., nursing graduates' performance on the state examinations)	3. Results on licensing and certifying board examinations
4. Are students achieving a broad general education?	4. Standardized assessment instruments; "capstone" courses; communication and computational skills in course assignments; observation of ability to work cooperatively; follow-up surveys of employers
Comment: As noted in an earlier section, the degree to which a general education core is feasible in technical and career programs varies. Even so, measurement of student skills in this area is important to the assessment of the overall effectiveness of the career mission.	
Fulfilling Student Goals	
5. Are individual students achieving their educational goals?	5. Enrollment profiles, including data on educational goals; student surveys
6. Are career programs designed to meet the needs of a variety of subgroups? (e.g., first-time job seekers, retraining workers, returning women)	6. Student profiles and demographics; faculty profiles and demographics; class size; student/faculty ratios; content analysis of programs, courses, and services to insure that a comprehensive set of offerings are available to address diverse needs; surveys of students and community on perception of needs and availability of programs
Comment: Because individuals pursue diverse educational goals and enroll in a variety of courses/programs, researchers need samples from a wide range of courses/programs to determine goal attainment from differing subgroups.	
7. Are individuals satisfied with the overall instruction, delivery, and content of the course, program, or service?	7. Surveys/interviews of current and former students

A Guide to Assessing Career Preparation

Questions	Data Sources
8. Are students finding jobs in the areas of their training? attaining promotions? able to change careers?	8. Follow-up surveys/interview with students; military files; wage and salary records of state departments of labor; college placement service records
9. Are college placement services effective in assisting students find jobs after program completion and/or goal attainment?	9. Placement service records; student follow-up surveys/interviews
10. Are career counseling services effective in helping students make appropriate career choices?	10. Interviews/surveys/focus groups with both current and former students
11. Do students who complete "two plus two" programs progress to the university portion of the program without difficulty?	11. Transcripts; transfer institution records; follow-up surveys of program completers
Meeting Employer Needs	
12. Do career programs and courses meet the hiring needs of local employers?	12. Employer surveys/interviews; analysis of program/course offerings; labor market supply and demand data; advisory council reviews
13. Are the skills taught in courses and programs up-to-date and appropriate for the local job market?	13. Follow-up surveys/interviews/focus groups with former students and their employers; labor market supply and demand data; advisory council reviews

Comment: Employer follow-up surveys are generally conducted after the student has left the program. It is important to note that these surveys focus not on the job performance of individual, former students, but rather on the job-related knowledge, attitude toward work, communication and interpersonal skills, and the overall job preparation the employee brings to the position. To the degree possible, employer follow-up surveys should focus on the career education a former student received rather than on the student personally. This distinction is a difficult but important factor to incorporate into the design of employer follow-ups.

14. Are customized training programs meeting the needs of employers? Are they meeting the needs of employees?	14. Surveys of participants; exit interviews with employer representatives and employees to determine overall satisfaction, met and unmet expectations and needs, and suggestions for program improvement
15. Are apprenticeship training programs meeting the needs of organized labor? Are they meeting the needs of apprentices?	15. Surveys of participants; exit interviews with apprentices and representatives of labor

Comment: Effectiveness in providing contract and customized training for business, industry, and labor is also an important issue in assessing the continuing education and community service mission discussed in the following pages.

A Guide to Assessing Career Preparation

Questions	Data Sources
Contributing to Economic Development	
16. Do community members perceive that college career preparation programs are effectively meeting their career needs, as well as contributing to the economic well-being of the community?	16. Community surveys, interviews, and focus groups
17. Do career programs (and the college as a whole) make a significant economic contribution to the community?	17. Economic impact studies; number of employers attracted to the community by the quality and availability of career preparation programs; number of businesses who have employees who have learned or improved job skills at the community college

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The Basic Skills and Developmental Education Mission

Expanding higher education opportunities to populations previously unserved was a founding principle of the community college movement and remains a distinguishing characteristic and commitment of modern comprehensive community colleges. This principle has been put into action by open-access admissions policies that have resulted in community college student populations with diverse demographic characteristics, socio-economic backgrounds, educational objectives, and academic preparation and skills. As a result, community colleges nationwide have developed a comprehensive range of precollege-level programs for students who are, at entry, underprepared for postsecondary study.

The role of community colleges in providing basic skills and developmental education has a controversial history. Because community colleges assumed the leading role in higher education of providing programs for the academically underprepared, they felt the criticism of various politicians and publics whose more traditional sense of what constituted college study excluded remedial courses in reading, writing, and mathematics. Protests that taxpayers should not have to pay twice for such skills development and the unwillingness of some faculty to be associated with such instruction caused champions to develop various rationales to defend this mission of community colleges. Even the appropriate term by which to refer to these programs has been debated heatedly because of the connotations associated with the alternatives: "remedial education," "developmental education," "basic skills training," "adult basic education," and others.

However, the dynamics of the issue have changed dramatically as social and educational commentators, community and business leaders, and politicians at the local, state, and national level have come to recognize that the growing gap between the decreasing skill levels of those entering the work force and the increasing skill levels required to compete in an emerging global economy represents a serious national problem. Added to this is the unpleasant and socially unacceptable reality that minorities, especially in urban areas, constitute a disproportionate percentage of underprepared students. Consequently, a consensus has emerged that raising the skill levels of underprepared students and adults is a major national educational priority, and community colleges have, by and large, been assigned this difficult but critical task.

Underpreparation is, of course, relative to an expected norm. Various reports indicate that as many as seventy percent of community college students require some precollege-level courses in reading, writing, and mathematics. Highly selective public and private universities make similar reports that preparatory work is required of most entering students, though it is clear that these reports reflect different levels of expectations. Assessing the effectiveness of community colleges' performance in their basic skills and developmental education mission requires measuring outcomes against the specific expectations of a broad range of programs serving a great diversity of clients.

Clients

Although the students served by this mission of community colleges share a common characteristic—underpreparation in basic academic skills—they represent considerable diversity in many other respects. They range in age, level of formal

education, native language, socio-economic circumstance, cultural background, and needed skills. The following represent some of the major categories of students served by basic skills and developmental education programs in community colleges:

- ***Recent High School Graduates.*** A large number of students requiring remediation in reading, writing, and mathematics skills are recent high school graduates seeking to enroll in community college courses and programs. Despite their completion of high school diploma requirements, many graduates test at reading levels below what is required for success in introductory college courses in the humanities, history, social sciences, or life and physical sciences; demonstrate inadequate writing skills to succeed in college-level courses; or are deficient in mathematics preparation, which prevents them from succeeding in college algebra. Some also may not have taken appropriate course work to prepare for specific community college career programs and require prerequisite courses in mathematics and the sciences.
- ***Returning Adults.*** Many older students returning to college after some period of absence from formal education also find that they need refresher courses in academic skills and prerequisite courses in fields that have changed considerably since they attended high school. This population is quite diverse, including adults who need to relearn skills once mastered as well as those who have never mastered the academic skills required to succeed in college courses and programs.
- ***High School Dropouts.*** A somewhat different group of students includes students of various ages who have never completed high school and require considerable remediation in basic skills for purposes ranging from maintaining job skills in an increasingly demanding work force to re-entering the formal education system in order to improve their economic circumstances and the quality of their lives. Many in this group are students whose goals are simply to complete high school, rather than to pursue any form of postsecondary education.
- ***Illiterate Adults.*** A specific subset of students served by community college programs is adults who are functionally illiterate. Estimates of the number of adults who are functionally illiterate range as high as 30 million nationwide, and another 50 million are thought to be marginally literate. Furthermore, this group is growing at the estimated rate of 2.5 million illiterate adults per year. Studies of the phenomenon have identified adults from all socio-economic classes who lack adequate literacy skills, yet the great majority are concentrated among the economically disadvantaged. The extent of the problem has been magnified by a changing economy that has decimated previously higher-paying but semi-skilled jobs in the manufacturing sector, leaving many middle-aged or older workers with marginal skills unable to retrain successfully for more demanding jobs.
- ***Immigrants and Students with Limited English Proficiency.*** A large and rapidly increasing group of students, especially in certain regions of the country, are recent immigrants, as well as foreign students, from Latin America, Asia and the Pacific Rim, the Middle East, Africa, and Eastern Europe. The number of second and third generation American citizens for

whom English is not their predominant language has also increased rapidly. Instruction in English as a second language is a common need among this population, and many require an orientation to American laws, the nation's economic system, and various aspects of living independently in modern American society.

Some of these students may share similar problems with the general underprepared population, but others have strong academic backgrounds, professional and job skills, and clear educational and career goals. On the other end of the spectrum, recent immigrants from impoverished lands not only may require English language instruction in reading and writing but also may be illiterate in their native tongues.

Underprepared students enrolled in basic skills and development education programs in community colleges are a diverse group. Yet, while there are exceptions, many requiring remediation in basic skills also are disadvantaged by vague or unrealistic personal and career goals, weak self-concepts, previous academic failures, and difficult socio-economic and family circumstances. As a result, the challenge of serving these students often goes beyond instruction in reading, writing, and mathematics and includes providing a range of support services.

Programs

Although students in these programs have very diverse goals, and many may stop short of entry into college-level programs, all basic skills and developmental education programs are designed to provide the skills necessary to succeed in the next level of education. The most common types of programs include the following:

- ***Precollege-Level Skills Development.*** Often called developmental education programs, these are designed for recent high school graduates and returning adults who lack college-level skills in reading, writing, and mathematics, but intend to enroll in other college courses and programs. Developmental education also addresses students who lack knowledge in courses that require high school prerequisites such as chemistry or biology.

  These programs are organized in various ways. The two most common approaches are the addition of precollege-level courses as part of the offerings of the English and mathematics departments, or the establishment of a separate division of developmental studies that offers a range of precollege courses in various disciplines. While traditional classroom methods are often used in these programs, the self-paced, laboratory method of instruction is commonly used either as a primary or supplemental approach. Trained peers, aides, or instructors often provide tutoring, and in recent years, many colleges have experimented with instructional technology to assist or manage instruction in basic skills.
- ***GED Programs.*** General Equivalency Diploma (GED) and adult high school programs enable both recent high school drop-outs and older adults to complete high school. Adult high school programs typically use the traditional classroom approach, and diplomas are granted by the local high school district. GED programs tend to be self-paced with the state issuing a high school equivalency diploma upon passing a national Department of Education exam.

- ***Adult Literacy/ABE Programs.*** Adult basic education (ABE) programs are designed to combat adult illiteracy and are offered in a host of arrangements, including small classes and one-on-one tutoring offered through outreach centers in libraries, shopping malls, and local high schools. Traditionally, literacy programs aim at developing skills to the eighth-grade reading level, though some programs attempt to bring all students to the twelfth-grade level. Also frequently included in these courses are functional literacy skills that include the ability to perform basic tasks essential to functioning adequately in modern society, such as writing checks or reading basic directions.
- ***ESL Programs.*** Instruction in English as a second language (ESL) is offered in an increasing number of community colleges. Although particularly prevalent in South Florida, Texas, and the Southwest for Spanish speakers from Latin America, the influx of immigrants from across the globe has spurred the offering of such programs throughout the United States for students from a variety of language backgrounds.

  Methods for teaching ESL vary, though graduate degree programs produce specialists in this pedagogy. Programs range from intensive immersion institutes that attempt to teach basic English language competence in a matter of weeks to noncredit evening classes that meet once or twice per week. In some colleges, English is actually taught much as a foreign language in regular credit courses.
- ***Support Services.*** Cooperative programming with other service providers is important to this mission for community colleges. This includes public and private agencies whose clients need basic skills education, as well as business and industry, which may provide their own developmental programs. A host of support services has also evolved as a critical part of a comprehensive program for underprepared students. Placement testing is at the heart of these services. Personal, academic, and career counseling, as well as child care, financial aid, assistance with transportation, and access to community-based social services are often included to meet student needs.

Assessing Effectiveness

Although considerable overlap exists among the assessment issues and methods across community college missions, some strategies are more pronounced for a given mission. Interviews or focus groups, although time consuming, are sometimes necessary to determine student goals and satisfaction, especially with the clients of many basic skills and developmental education programs. Student expectations and goals often are different than officially recorded in initial enrollment materials; even in an interview setting, many of these students have difficulty articulating their individual goals. Thus, trained interviewers who are culturally sensitive are key to assessment efforts in this area.

Case studies can also be valuable in assessing this mission. Because these programs often result in dramatic effects on individual students, videotaped interviews provide a secondary benefit as the source of testimonials to the effectiveness of college programs. On the other hand, retention studies often do not accurately represent the effectiveness of these programs because students frequently "stop in" and "out" rather than pursuing their goals in consecutive terms. Even

completion studies are themselves poor measures of whether programs have succeeded in preparing students for postsecondary studies.

A comprehensive assessment of a community college's performance of its basic skills and developmental education mission should involve measurement of the following outcomes:

- Achieving educational outcomes
- Meeting student needs
- Meeting community expectations

The following key questions and data sources can assist a college to conduct such an assessment.

A Guide to Assessing Basic Skills and Developmental Education

Questions	Data Sources
Achieving Educational Outcomes	
1. Are students attaining the skills identified as course and program objectives?	1. Pre- and post- competency testing, including assessments of nonacademic skills; follow-up surveys, interviews, or focus groups with teachers and employers; grades in courses; case studies
2. Are students completing courses and progressing through programs at reasonable rates?	2. Student enrollment records; grades in courses; follow-up surveys and interviews with students; records of time on task
3. Are students progressing to and succeeding at the next level of education? in postsecondary education programs?	3. Student enrollment records; grades in courses; follow-up surveys and interviews; results of studies comparing the performance of students who have completed developmental programs with those who enrolled directly in postsecondary programs
Comment: Because underprepared students often follow intermittent enrollment patterns, longitudinal follow-up studies will require a data base and research design that extend at least five years from initial enrollment. Long-term longitudinal follow up is particularly important for underprepared students because their initial goals might not include enrollment in the next level of education, or they may not enroll in a postsecondary program immediately upon attaining basic skills competencies.	
4. Are students from different subgroups succeeding at comparable rates? Are student success rates comparable among the various college programs for underprepared students?	4. Student enrollment records; indicators of student success by program

A Guide to Assessing Basic Skills and Developmental Education

Questions	Data Sources
Meeting Student Needs	
5. Are students' career and personal development needs being met?	5. Pre- and post-tests using affective instruments; educational planning documents; follow-up surveys, interviews, and focus groups with students; case studies

Comment: Implementing college processes that assist students to identify and regularly update their individual career and personal goals is a key step in assessing goal attainment. This must be done especially carefully with underprepared students, for many begin programs with vague or unrealistic goals.

6. Are students satisfied with course and program content, teaching methodologies, and support services?	6. Surveys, interviews, and focus groups with students
7. Are assessment tests placing students in courses appropriate for their skills?	7. Course grades; teacher assessment of appropriate placements; test scores; high school grades; results of studies correlating placement recommendations and course success
8. Are developmental students being successfully integrated into college life?	8. Surveys, interviews, and focus groups with students; records of student participation in extra- or co-curricular activities
Meeting Community Expectations	
9. Are a reasonable number of high school dropouts, illiterate adults, and ESL students enrolling in appropriate college programs?	9. Student enrollment records; comparisons with national, state, and community census data and estimates of target populations; other secondary sources of data, including social service agencies, churches, etc.
10. Does the college cooperate effectively with other service providers in the community?	10. Inventory of other educational programs and related services in the community; evidence of cooperation, including client referrals, resource sharing, etc.; interviews with community leaders
11. Do college programs for underprepared students assist in reducing related social and economic problems?	11. Agency studies; state and community socio-economic data; crime data; interviews with community leaders

Comment: Establishing a causal link between college programs for underprepared students and reduction in poverty or crime rates may be beyond the scope of college efforts. However, more direct relationships, such as those between college programs and increased community literacy levels, should be documented if feasible.

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Central Piedmont Community College

The Continuing Education and Community Service Mission

The continuing education and community service mission of community colleges also has a controversial history. During the expansion of the 1960s and 1970s, community colleges nationwide undertook to serve the expressed needs of their constituents and the communities in which they were located. However, by the early 1980s, economic shortfalls caused states to call into question the colleges' attempts to be "all things to all people," and the noncollegiate aspects of the nontraditional continuing education and community service mission were severely criticized.

With some exceptions, most community colleges now operate these missions on a cost-recovery basis, charging user fees to cover direct costs. Such reforms have blunted criticism of providing a diverse array of courses, programs, and services that range from strictly avocational and recreational pursuits to rigorous customized training in emerging technologies offered on a contract basis to employees of local business and industry. In fact, the increasing demand for training and retraining of the work force by instruction provided in nontraditional formats and using alternative delivery methodologies that cannot be accommodated by college-credit courses has helped legitimize the mission and has boosted recognition of community colleges as major assets for community and economic development.

The continuing education and community service mission is central to community colleges' distinguishing characteristic as public institutions supported by and responsive to the needs of their local constituents. Consequently, the programs and services offered vary greatly to reflect the needs and interests of local communities, as do the various terms by which the mission is referred. In some colleges, the term "continuing education" refers explicitly to noncredit courses, seminars, and workshops; in others, the term is used to indicate the intent of the instruction to provide lifelong learning that continues previous educational accomplishments, whether credit or noncredit. The term "community service" does not usually refer to courses, but to a broad range of activities or support functions provided by the college to individuals or groups in the community; however, what such a definition encompasses varies enormously from college to college.

Finally, often overlooked in the discussion of the continuing education and community service mission of community colleges is its role in support of other missions. Continuing education can serve as a proving ground for new instructional formats and content areas in which ideas are tested prior to their introduction in the credit curriculum. Also, adult members of the community often first come in contact with the college in the less threatening atmosphere of continuing education or community service programs and then enroll in other credit courses as a result of their positive experiences. Finally, the mission concretely demonstrates to local constituents the value and responsiveness of the college to their needs and can help build necessary political and financial support for its overall operation.

Clients

The clients served by the continuing education and community service mission of most community colleges are as diverse as the constituents in their local service areas. In fact, any attempt to classify the major clients of this mission must result in a somewhat arbitrary categorization. Nonetheless, the following listing

describes key client groups of interest to an assessment of the effectiveness of the performance of a community college's continuing education and community service mission:

- ***Educated Adults.*** Because statistics show that those with formal education are the most likely to seek additional education, the largest group of continuing education students for most community colleges are those among the general public who have already earned associate's, bachelor's or higher degrees but continue to enroll in courses to learn new skills, to update previous knowledge in a field, or to complete their general education. Noncredit courses or workshops in using the latest word processing, spreadsheet, or database computer software programs have been extremely popular with this group, as have courses, seminars, and lectures in the humanities and public affairs.

  Also, in many communities, the college is a focal point for much of local cultural activity. Colleges sponsor performances by theater groups, ballet troupes, musical and chorale ensembles, and lectures by scholars and other prominent individuals as a service to their communities.
- ***Employees of Local Business and Industry.*** Employees of companies that expect or require them to update or improve their job-related skills operate a large and quickly growing group of students for most community colleges. In most cases, the companies identify the nature of the training the employees will receive and contract with the college to provide it by whatever means is considered most effective and convenient. The noncredit continuing education format is an attractive alternative to traditional college-credit courses because it allows the training to be specifically focused on a company's needs and delivered within whatever time frame is requested. This approach is also being tested in the credit curriculum because of the large market potential for workforce enhancement.
- ***Professionals Requiring Continuing Certification.*** While this is a relatively small group of students for most community colleges, providing courses and seminars for professionals needing to meet certification requirements represents one of the most commonly understood functions of continuing education. Workers in a number of professions are required to demonstrate currency in their fields and to complete continuing education units (CEUs) to maintain their certifications. Nurses and others working in allied health fields represent a major share of this group served by community colleges.
- ***Casual and Recreational Students.*** A large number of continuing education students enroll in courses or attend programs that might most accurately be described as avocational or recreational. Instruction in contract bridge, cooking, exercise and nutrition, managing personal investments, or crafts techniques all appeal to various constituents who seek recreation, self-improvement, or life-skills development as part of a pattern of casual association with formal educational programs. Included within this group are a host of special interest groups, including older adults, women who do not work outside the home, and others for whom the social aspects of education are also a motivation to participate.
- ***Community Organizations.*** Probably the largest client for the community service mission are local government agencies, nonprofit organizations,

other community groups, and the citizens they serve. Community groups, ranging from local theater groups and artists to children's sports leagues, also often use the performing auditoriums, sports fields, classrooms, and meeting space provided as a service by a community college.

- ***The General Public.*** Community colleges, particularly in small or rural districts, often provide general community services in the absence of other organizations to meet community needs. Under the rubric of community service, colleges run planetariums, public libraries, art galleries and museums; provide services such as drug abuse or family counseling; sponsor summer youth camps; and organize community festivals, cultural and civic events. A target population for many of these activities are area youth, particularly at-risk or potential first-generation college students whose involvement in community service activities may acquaint them with the college and encourage them to consider future enrollment.

Programs

To be effective, continuing education and community service programs must respond to the expressed needs of the local community. The following are some of the more common programs offered by community colleges in response to local needs:

- ***General Interest, Noncredit Courses and Programs.*** Probably the most noticeable aspect of the continuing education mission is the large number of courses advertised quarterly or semi-annually in a college's "noncredit course bulletin." The diversity of such courses is much greater than that provided for college credit; the primary criterion for offering these courses is what the market will bear. Noncredit courses include exercise, musical performance, crafts, expressive arts, computer use, investments, life skills, self-employment skills, and hobbies, as well as academic courses that are offered in a noncredit mode to accommodate the busy lifestyles of adult students. In nearly all colleges, only those courses that register a sufficient number of students to cover direct costs are allowed to operate.
- ***Training and Retraining.*** As previously mentioned, one of the fastest growing markets for community college programs is customized training and retraining offered on a contractual basis for employees of local business and industry. Such training matches or exceeds the rigor of similar courses offered for credit in career programs but often is provided on a noncredit basis in order to be free of the constraints imposed by credit formats. It is with such training that the career preparation and continuing education missions of community colleges most closely converge. The strong record of community colleges in meeting the training needs of business and industry is also largely responsible for the emerging high regard in which this segment of higher education is held by an increasing number of politicians and business leaders.
- ***Lectures, Performances, and Special Events.*** Nearly as varied as community college clientele are the events sponsored by a college as a service to the community and a hub of its cultural and intellectual life. Programs include performances by professional touring theater, dance, and musical groups, as well as locally produced performing arts. Many community colleges also

hold lecture series that include prominent figures at the local, state, national, and international level. Some host charity and other social events as a contributing member of the community.

- ***Community Services.*** The range of services provided by a community college reflects the capacity of the college, the services available in the community, and unmet needs to which a college can contribute. Community colleges sometimes provide direct, education-related services, such as personal counseling and job placement assistance, to supplement other social services available from local agencies. In other cases, a college might serve simply as a clearinghouse or referral center for a range of existing services provided by other area agencies. In fewer cases, local governments and businesses might employ technical and consulting services available from the community college, including research, evaluation, demographic analyses, and computer services. Most such services are provided on a cost for services basis, though community colleges may sometimes contribute their expertise to serve the best interests of the community at large.

Assessing Effectiveness

What constitutes an effective continuing education and community service operation is determined by the clients a community college elects to serve, the programs it chooses to offer, and the outcomes it hopes to produce. In general terms, most community colleges can assess the effectiveness of their continuing education and community service missions by concentrating on four key goals:

- Achieving educational outcomes
- Attaining program outcomes
- Meeting community needs
- Bridging to other college missions

Also, as colleges consider intended outcomes, they should identify both the direct and the indirect benefits they expect to produce by offering a program or service. For example, a customized training program designed to improve the reading skills of employees has the direct benefit of increasing both worker skills and productivity. In addition, such a program may have the indirect outcome of keeping the company located in the area, with all the attendant economic benefits to the community. Although indirect outcomes are difficult to measure, colleges should attempt to specify those they hope to accomplish and then document these outcomes as best as they can.

Another motivation for assessing a college's performance of its continuing education and community service mission is that the adult education market is highly competitive. In order to compete successfully with other providers, community colleges must develop means to assess community needs and interests accurately; to evaluate program elements, including quality, delivery method, place, and price; and to monitor and control the costs of producing continuing education programs. They must learn their market and serve it effectively.

The following questions and data sources can assist a college to conduct a comprehensive assessment of its continuing education and community service mission.

A Guide to Assessing Continuing Education and Community Service

Questions	Data Sources
Achieving Educational Outcomes	
1. Are individuals achieving their educational goals?	1. Data on individuals' educational goals collected upon enrollment; student surveys on goal attainment upon completion of or withdrawal from a course or program
2. Are customized training programs or other targeted courses meeting the needs of the individuals for which they are intended and the sponsoring company, agency, or group?	2. Surveys or interviews with participants upon exit; follow-up interviews with sponsors to determine overall satisfaction and suggestions for improvement
Attaining Program Outcomes	
3. Are continuing education programs achieving their intended direct outcomes? intended indirect outcomes?	3. Follow-up surveys and interviews of students; course syllabi; program competencies; performance on course tests; indicators of indirect benefits
4. Are continuing education courses, programs, and services having positive impact on the social and economic development of the community?	4. External data sources on community socio-economic conditions; periodic assessment of economic impact; number of businesses attracted to the community due to college programs; number of existing businesses, agencies, or community groups served; number of community issues or problems addressed
5. Do the benefits of offering a specific course, program, or service outweigh the costs?	5. Comparison of institutional financial data to direct and indirect benefits
Comment: The answer to this question depends , in large part, on the college's policy decision to offer continuing education courses, programs, and services on a cost-recovery, profit, or subsidy basis.	
6. Are continuing education programs being implemented as designed?	6. Periodic assessment to determine whether or not program failures result from poor design or improper implementation
Meeting Community Needs	
7. Is the community aware of the college's continuing education and community service programs? What is its perception of them?	7. Community surveys and/or focus groups
8. Is the community participating in these programs and using these services?	8. Enrollment and attendance reports

A Guide to Assessing Continuing Education and Community Service

Questions	Data Sources
9. Are continuing education programs, courses, and services designed to meet the needs of various groups in the community, including the young, old, different economic classes, employed, unemployed, etc.?	9. Content analysis of programs, courses, and services to ensure that a comprehensive set of offerings are available for a variety of needs
10. Are the continuing education courses, programs, and services accessible to individuals and various groups throughout the college's service area?	10. Community and student surveys/interviews; analysis of geographic location of programs in relation to major traffic arteries and public transportation; enrollment profiling by zip code; enrollment profiling by different client groups
11. Are individuals satisfied with the overall instruction, delivery, and content of the course, program, or service?	11. Surveys/interviews of current and former students
Bridging to Other Missions	
12. Do continuing education and community service programs help attract students to other college programs?	12. Analysis of student enrollment patterns among programs; student surveys, interviews, and focus groups
13. Are innovative instructional formats, operating procedures, and other innovations piloted in continuing education and community service programs adopted by other college programs?	13. Interviews with faculty and administrators of continuing education and community services; analysis of spread of innovation
14. Does the college facilitate the easy transition from continuing education and community service programs to other college programs?	14. Surveys, interviews, and focus groups with students
15. Is the organizational relationship between continuing education/community service and other college divisions cooperative?	15. Interviews with administrators and faculty in each area

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The Access Mission

Public policy decisions made during the Great Society era to provide universal access to higher education were in large part responsible for the rapid expansion and development of a uniquely American institution, the community college. Established on the principle that people of all ages, of all races, of all stations in life, and in all geographic regions should have access to educational opportunity beyond high school, the public community college has become the embodiment of democratic idealism in higher education in the United States.

Consequently, access has become a superordinate mission of all community colleges, infusing all of the programs and services provided by the transfer, career preparation, basic skills and developmental education, and the continuing education and community service missions. The performance of each of these distinct missions is judged by such outcomes as number of students transferring successfully, attaining career goals, obtaining skills necessary for life or further education, and fulfilling personal goals. However, success in providing access to community college programs is judged by the degree to which students from all socio-economic, cultural, and racial and ethnic backgrounds; students from throughout the geographic service area served; students of all ages and gender; and students handicapped by various physical or learning disabilities enroll in, persist through, and succeed at college programs. Relative rates of participation and success of nontraditional, or traditionally underserved students, are often compared to their representation in the population of the service area or to the rates of traditional student cohorts to determine the effectiveness of a college's attempts to provide meaningful access.

Because community colleges are committed to this overarching mission of providing access to target populations, particularly those traditionally underrepresented or underserved by higher education, a thorough assessment of an institution's effectiveness includes determining its success at opening its doors to all who can benefit from its programs and services.

The access mission implies a commitment to ensuring the "open door" does not become a "revolving door." Thus, community college interventions include special policies and procedures, programs, and services designed to improve access and success for all those who can be served. Many such programs and services are offered through a college's student development division, which has traditionally championed student access and success as its dual mission. Thus, while student development programs seek to serve and support all students and all of the college's missions, they are particularly key to the success of the broad-based access mission.

Finally, while assessment of effectiveness in performing most of the more traditional college missions is rooted firmly in measuring student outcomes, assessment of the access mission is also concerned with institutional processes that are essential to accommodate both access and student success. So, while the access mission is superordinate to and integral to all community college missions, it is of a special nature that requires sensitive assessment of its effectiveness.

Clients

In a very real sense, the primary mission of a modern, public, comprehensive community college is to provide meaningful access to all of the constituents in its service area who can benefit from college programs and services. The clientele served by a community college, then, are as numerous and diverse as the population

of its community. Yet the special commitment of community colleges to universal access generally translates into making special efforts to attract and serve students who are traditionally underrepresented in institutions of higher education. The following include some of the special populations on whom community colleges focus their efforts to achieve broad-based access to their programs.

- ***Evening and Weekend Students.*** In addition to the traditional students served by their transfer, career education, and continuing education programs, community colleges make special effort to serve well-prepared, and otherwise rather traditional, students who cannot attend during morning and afternoon hours on weekdays—generally because of work or family commitments. These efforts include providing a full range of both academic programs and support services during the evening and on weekends, when such students can attend college. Typically, these students are somewhat older than traditional college age and attend college part-time.
- ***Remote Students.*** There are also a number of students who cannot come to the college campus at all, and community colleges have developed a range of outreach facilities and distance education via telecommunications aimed at providing programs and services to these constituents. Potential students who cannot participate in programs on campus vary widely and include inmates in correctional institutions, those confined to home or health care facility by disability or disease, those who live in remote or rural areas, and those who lack access to adequate transportation.
- ***Disabled Students.*** Community colleges are leaders in higher education in eliminating obstacles that impede access to college programs and services to those who suffer handicapping conditions of various kinds—a responsibility increasingly accepted by society at large and a subject of major, recent, federal legislation. Such students may be hearing-impaired, vision-impaired, or physically challenged, and colleges have tailored a variety of services to meet the specific needs of each type of disability.

  The mentally handicapped and those with learning disabilities represent a more complicated challenge in that the degree of disability can limit the range of college programs appropriate for this clientele. Nonetheless, community colleges have developed programs and services for potential students with such disabilities as a result of their commitment to access to all who can benefit.
- ***Underprepared Students.*** Students underprepared to participate in college-level programs often due to poor academic preparation, inadequate orientation to college expectations, or other disadvantages due to socio-economic or cultural backgrounds, represent perhaps the largest and most varied clientele for which community colleges provide access to higher education opportunities. Such students include high school dropouts, illiterate adults, immigrants, and others with limited proficiency in English. For more details on this group of students, refer to the chapter on the basic skills and developmental education mission.
- ***Minorities.*** Community colleges, representing the most democratic instincts of American society, have a strong and long-lasting commitment to assisting minorities gain access to the advantages that accrue to success in higher education. In fact, the majority of all minorities—generally identified as African-Americans, Hispanics, Native Americans, and Asians—

begin higher education in a community college. While not all minorities require any special efforts on the part of community colleges to assist them to gain meaningful access to their programs, the fact is that minorities are disproportionately represented among those students underprepared for college work. Concerns for the relatively limited success that minorities attending community colleges have had in earning degrees and successfully transfering to four-year colleges and universities have raised alarms among community college leaders and supporters and resulted in increased efforts to produce better outcomes. Thus, minorities have become a population of special interest for most community colleges, especially those located in the major urban areas of the country.

- ***Youth-at-Risk***. Many community colleges are extending their traditional roles of providing access to education to minority and underprepared students by working with students earlier in their academic careers to motivate and assist them to pursue postsecondary education. Community colleges offer programs to students in area secondary, junior high, and even primary schools, whose demographics or community or family histories indicate they are unlikely to complete a college degree. Such programs typically aim to expose youth-at-risk to role models and mentors, to give them career and educational counseling to raise their educational aspirations, to educate them about the skills and understandings they must develop to succeed in college work, and to tutor them in basic academic areas in which they show weakness.
- ***Military Personnel***. Educating men and women serving in the armed forces presents a particular challenge to community colleges, since military personnel are often transferred before they can complete degree requirements. Furthermore, many enlistees work irregular hours or are assigned to ships that are at sea for months at a time. Some colleges have developed specialized distance education or other such programs to meet the needs of military personnel; many others participate in the national Service members Opportunity College (SOC) program, which coordinates progress towards degree completion by military personnel between the different institutions they attend as they move from one military assignment to another.
- ***Older Adults***. Retirees and other older adults who have embraced the idea of lifelong learning commonly turn to community colleges to continue their educational development throughout the course of their lives. In addition to welcoming such students into the normal range of classes and services, many community colleges deliver courses tailored to mature audiences on the sites of nursing homes and senior citizens centers. Others sponsor senior centers or other such programs on the campus, encouraging older students to participate fully in general college activities, as well as those designed specifically for older populations.
- ***The Poor***. One vital, but often unacknowledged, way that community colleges promote access to higher education is by eliminating financial barriers to pursuing college studies by those with limited funds. The economically disadvantaged often can not afford to pay even the minimal tuitions typically charged by community colleges, nor can they spend much money on books, materials, and other student-related charges or activities.

Thus, not only are community colleges extremely cost-sensitive in developing and offering their programs, they maintain vigorous student financial aid and scholarship programs that attempt to assist students in meeting the financial commitments of their education. Many community colleges also operate book exchanges, equipment and software loans, free computer labs, and other related programs to provide economically disadvantaged students with the tools and materials they need but can not afford to purchase on their own.

- ***Other Special Populations***. Finally, as part of their responsiveness to local needs, community colleges develop other specialized programs to reach out and serve nontraditional student groups in their area. Such students typically enroll in the normal range of classes, but receive special counseling and/or participate in group activities to acclimate them to college studies and assist them in achieving their educational objectives. One of the most common groups for such programs is displaced homemakers or other older women returning to college and/or work after an absence of many years, usually because they were caring for a family. Other such groups include veterans and recent immigrant groups.

Again, these categories of students are representative rather than inclusive of the range of clients for which community colleges develop special programs and services to eliminate obstacles to higher education. Community colleges are equally committed to insuring the traditional, eighteen year-olds or other "mainstream" students also gain meaningful access to a full range of academic programs.

Programs for Educational Opportunity

In their quest to assure access to higher education by all within their service region, community colleges have developed programs ranging from the commonplace to the exotic to accommodate needs of the diverse student populations they serve. These programs can be categorized as serving primarily two complementary aims: promoting access to educational opportunity and promoting student success.

The major types of programs whose principal purpose is to provide access to special populations that are underrepresented in higher education include the following:

- ***Open Admissions***. The most fundamental aspect of the attempt by community colleges to support access is the prevailing policy of allowing anyone to enroll, regardless of prior academic experience or achievement. This distinguishes community colleges from most four-year college or universities, which often require high school diplomas or minimum scores on standardized achievement tests as a prerequisite for admittance. Not only do community colleges try to serve any students who wish to attend, they often initiate programs to make it as easy as possible for the students to register. Such efforts include offering on-the-spot registration in shopping malls, high schools, community centers, and other convenient locations, and allowing students to register by telephone or other technology-based procedures.
- ***Outreach Programs***. Community colleges reach out to serve constituents throughout their district in a variety of ways, predicated upon regular

surveys of community needs. Although the campus is typically located in the heart of the district with easy access by both public and private transportation, colleges extend their outreach by offering off-campus programs and services at times and in locations convenient to residents of the service area. Community colleges often operate branch campuses and satellite facilities leased in high schools, churches, and shopping centers in order to bring programs within easy commuting distance. Many extend the reach of their programs even further by means of telecommunications technology, including cable television, satellite downlinks, facsimile machines, and other closed-circuit transmissions that remove barriers to participation for those who cannot otherwise enroll in campus-based programs.

- ***Alternative Delivery Methods***. The host of new computing and telecommunications technologies also helps eliminate the schedule constraints that prevent many students from regular attendance at college. Telecourses, videotapes, audio tapes, compact discs, computer software, modem-activated computer conferencing, electronic databases, and interactive videodisc all expand the ability of community colleges to offer individualized, self-paced instruction that conforms to the schedule and other needs of the students. In some cases, this liberates students from regular time slots, for example, three times a week for sixteen weeks, that do not fit into their busy lives, or allows them to enter and exit programs at their own convenience and their own pace. For others, such technologies represent an alternative approach or additional assistance they need to supplement their traditional instruction in order to succeed in their normal courses.
- ***Recruitment***. In addition to aggressive efforts to remove barriers to attendance by constituents, community colleges also make concerted efforts to recruit those who otherwise might not consider a college education a viable alternative for them. Recruitment programs typically are aimed at high school students, though an increasing number of efforts target working adults, especially those employed in local businesses and industries. Broad-based advertising campaigns about college programs are themselves a form of recruitment of the general population.

  Community colleges also have developed a range of sometimes innovative programs to attract target populations they believe they can serve effectively. Minorities, in particular, have been heavily recruited. Some programs work closely with local high schools, junior high schools, and even elementary schools to influence students to consider pursuing higher education and to assist them to develop realistic expectations of college work and the skills necessary to succeed in selected academic courses.
- ***Financial Aid***. Because tuition and other costs related to education can be a formidable obstacle for many potential students, community colleges have established substantial financial aid programs (in addition to working with staff, state officials, and legislators to keep student expenses as low as practical). A key to such programs is making information about financial aid widely available. Students often also need help in determining which programs are most suited to their needs and in filling out the required forms, which can be intimidating. Also of increasing importance is counseling students about the obligations and responsibilities involved in paying

back federal loans and insuring they do not take on a greater debt burden than their projected career income can support.

In addition to the financial assistance provided through state or federal programs, many community colleges have supplemented these programs with student scholarships and loans with funds raised in the local community, usually through the college foundation. In some cases, these scholarships are targeted at specific types of students enrolled in designated programs.

- ***Affordable Tuition.*** A related key to student access is that community colleges offer a rich array of high-quality educational services at a price that is not a roadblock to most students. Indeed, the low per-student costs at most community colleges is unmatched by any other component of higher education. Two factors contribute to the great cost-effectiveness of these publicly-supported institutions: aggressive resource development and careful resource allocation and monitoring. Community colleges have been highly successful in obtaining outside grant funds, particularly from the state and federal government, that allow them to offer services or activities at reduced or no cost to students. Reliance on such outside monies, particularly from private sources, is expected to grow as state and local budgets continue to be squeezed. Community colleges also have admirable track records of running educational programs on limited funds through efficient management and low overhead and other administrative costs. The business offices, academic departments, and administrative units all work to produce extensive educational services at minimal cost to keep tuition and other student charges as low as possible.
- ***Special Support Services.*** Within the great diversity of community college students, there are many who require specialized support services in order for postsecondary education to be a real option for them. Thus, colleges offer a variety of support services to different student populations to enable them to pursue a college education.

  One major example of access-related services is the special assistance given to disabled students. Such support services include providing interpreters for hearing-impaired students, various aids for the visually impaired, mechanical aids to overcome physical disabilities, special assistance for students with learning disabilities, and programs for the mentally retarded.

  Day care services is another growing need in the support services area. As more and more working parents seek to enroll in community colleges, demand is mounting for on-campus programs to care for young children while their parents attend class. Other students need assistance with transportation, with housing, with health care, or with finding part-time employment before they can participate in college programs.

Programs for Student Success

Although access by itself is a measurement of intake not outcome, the real objective of this mission is to enable the greatest number of diverse students to achieve at least some level of postsecondary education. Thus, the first part of the access mission—providing educational opportunity—goes hand-in-hand with establishing programs and services to promote student success. Consequently,

assessing the effectiveness of the access mission requires examining not only the programs that reach out to bring in students, but also evaluating the institutional support services in place to help those students accomplish their academic and personal goals.

Naturally, these programs and institutional development services do not benefit nontraditional students alone; they also contribute to the experience of the eighteen-to-twenty-one year-old, full-time, transfer or career program students. However, for the client groups listed in the first part of this chapter, the extent and nature of such programs are more likely to make the difference between success and failure in meeting their intended objectives. Therefore, consideration of the role of such services in producing student outcomes has been included under the access mission.

Programs prevalent among community colleges that attempt to help translate open educational opportunity into meaningful student achievements include the following:

- ***Orientation***. Community colleges hold comprehensive orientation programs and provide substantial documentation for new students to acquaint them with the programs and services to support their studies and to help them succeed in their first-term adjustment to college work and life. These programs are particularly critical to retaining nontraditional students, many of whom have incomplete understanding of college expectations.
- ***Assessment and Testing***. The term "assessment" often is misunderstood because of its multiple meanings and references. While commonly used to refer to evaluating effectiveness (as in the title of this monograph), community colleges most frequently define assessment as the process of testing students on their entry-level skills in such areas as reading, writing, and mathematics in order to recommend or mandate placement into appropriate introductory courses. These programs usually rely on standardized tests plus other measures to determine student skill levels. (Whether course placements should be recommended or mandated to students remains a controversial issue outside the scope of this publication.)
- ***Academic Advising***. Nearly always coupled with assessment, academic advisement assists students in selecting appropriate courses of study for their educational and career objectives and entry-level skills. Schools vary as to what type of employee does the advising. Some have designated a separate class of professionals or para-professionals, others use faculty, and some use a combination approach.
- ***Counseling and Support Services***. Most community colleges also recognize that student success in college programs often is related to nonacademic variables that affect performance, and they provide a variety of support services to assist students in dealing with not only financial pressures, but also those related to family and work responsibilities, physical and mental health, transportation, and other such concerns. Trained staff are available to provide personal counseling to help students develop emotionally and socially. When a need goes beyond a college's ability to respond, counselors can direct students to appropriate community social service providers. Counseling also includes career guidance to assist students to make appropriate and realistic career choices.

- ***Academic Support and Tutoring***. Community colleges are noted for supplying a full range of academic support services, including supplemental instruction, peer and/or professional academic tutoring, instructional laboratories, extensive learning resource centers, faculty mentoring, and other intervention strategies. This support is most successful when provided within systems that monitor the progress of students in their courses and programs of study. Advances in computerized student information and instructional management systems have made possible sophisticated programs to alert faculty and counselors when appropriate interventions might assist student retention and academic success.
- ***Campus Life***. Although residential colleges and universities usually offer more comprehensive campus life programs, community colleges have responded to research results that link student association with college activities to academic success. Consequently, extra- and co-curricular programs have been developed to foster such associations, even in the context of predominantly commuter colleges. Such programs include a range of sports, clubs, film and speaker series, cultural organizations, student government activities, and multi-cultural and other events.
- ***Career Placement***. Most community colleges assist students, especially those in the college's career education programs, to find immediate employment in jobs for which they have been trained. This function has grown as links between community colleges and local employers have expanded so that career placement services fulfill both student and business and industry needs.
- ***Faculty and Staff Development***. More than any other type of higher education institution, community colleges have acted upon their commitment to provide meaningful access to college programs to students by operating programs to assist in the development of faculty and staff skills to meet student needs. As student demographics have changed, as knowledge of cognitive development has grown, and as advances in instructional technology have opened up new opportunities to assist students, community colleges have attempted to keep faculty and staff up-to-date with these developments and to help them apply this knowledge to improve teaching and learning. For example, community colleges have led in the area of "classroom research" (i.e., teachers monitoring results of different teaching techniques in their own classroom in order to improve student learning more immediately) and in working with multicultural student populations. Different types of initiatives focus on different aspects of the teaching and learning question, though all have the same goal of raising awareness, increasing sensitivity, and developing skills to assist student learning, retention, and success.
- ***Institutional Climate***. Related to faculty and staff development efforts are broad-based efforts by college leaders to create an institutional climate that is supportive of teaching and learning in a context of diversity—the principal focus of all college missions. Community colleges have recognized the importance of climate to student success, and have accepted the challenge of examining and modifying institutional policies, procedures, and processes to support this primary goal, even when this entails effecting substantial value changes within the institution. The linchpin to making

access meaningful to the diversity of students who are the majority clientele in the modern, public community college is the effort by college leaders to create an institutional climate that, above all else and throughout every activity, values both student diversity and a fundamental commitment to the primacy of student learning.

Assessing Effectiveness

In many ways, the access mission raises the most problems in assessing institutional effectiveness. Indeed, the actual student outcomes of the clients served under the access mission are merely subsets of the results of the four core missions—transfer, career preparation, basic skills and developmental education, and continuing education and community service. However, the special nature of the diverse community college clientele, with particular emphasis on nontraditional students, is what makes academic measurements, such as traditional transfer rates, inappropriate in the comprehensive community college setting.

On the one hand, because the access mission directs community colleges to bring in the kinds of students who are typically least likely to do well in postsecondary education, it is unreasonable to characterize slow or limited progress towards traditional educational goals as institutional failure. On the other hand, it is clearly unacceptable for community colleges to enroll as many students as possible if those students are not gaining anything from the experience.

And yet another consideration for community colleges is the fair and equitable distribution of public funds. For example, greater student outcomes for severely underprepared students might be achieved if sufficient funds were targeted for that purpose, but that would require either a major redirection of existing funds or massive additional expenditures by the students or the public, both of which are probably unacceptable in the current economic and political climate. While community colleges do offer blanket assurances of educational opportunity, they lack the resources to guarantee success to all students, particularly to those with unrealistic expectations and insufficient skills or motivations.

Therefore, assessing institutional effectiveness in the access mission demands balancing competing claims for accommodating diverse and nontraditional student needs, achieving standard student outcomes measures, and maintaining fiscal responsibility and reasonableness. At the heart of evaluating this balancing act is an assessment of program outcomes for target populations. Whether or not students from various ethnic and racial, cultural, socio-economic, and educational backgrounds, of various ages and different gender, and from various geographic areas enroll, persist, and succeed in college programs at reasonable rates is the ultimate determinant of a college's success in making access meaningful to all of its student populations.

So, success in performing the access mission should be assessed by determining the participation in and the outcomes of the four core missions identified in this monograph for target student populations. In addition, a college's efforts to evaluate its effectiveness should incorporate an examination of the student support programs and services it provides to determine if the college is doing all that is practical to promote student success.

Such assessment can be focused in the following key areas:

- Providing educational opportunity for targeted and special populations
- Promoting success for all students

The following questions and data sources can assist a college to conduct a comprehensive assessment of its effectiveness in accomplishing the superordinate mission of the modern, comprehensive, American community college: providing access to all who can benefit.

A Guide to Assessing Access

Questions	Data Sources
Providing Access for Targeted and Special Populations	
1. Are an appropriare array of programs and services available for targeted and special populations?	1. Community needs assessment; national, state, and local population data; other socio-economic data on community; surveys, interviews, or focus groups with other providers of services in the community; comparison of available services with expressed and estimated needs
2. Are a reasonable number of targeted and special populations being served by college services and programs?	2. Student enrollment data; data on student use of selected services; examination of scheduling and accessibility of services
3. Are targeted and special populations of students reasonably distributed across all college missions? How does this compare to the distribution for all students?	3. Student enrollment and profile data; comparison of demographic characteristics of students enrolled in transfer, career preparation, basic skills/developmental education, and continuing education/ community service programs
4. To what extent are program goals for special populations being reached? How do goal attainment rates compare to those for all students?	4. Program completion rates; transfer rates; job placement rates; surveys and interviews with employers; results of certifying board examinations, standardized assessment tests, and competency assessments; course grades and GPAs; enrollment and success in programs at the next educational level and/ or college courses; follow-up surveys, interviews, and focus groups with students and sponsoring organizations
5. To what extent are students from targeted and special populations achieving their individual goals? How do success rates compare to those for all students?	5. Student surveys, interviews, and focus groups; comparison of student outcomes to intended student goals

Comment: These key questions on proportionate enrollment, program outcomes, and individual goal achievement should be asked separately for each targeted or special population of concern to the college. A comprehensive response to the question of whether the college is effective in promoting meaningful access for special populations of students is a composite of these separate analyses.

6.	Are relationships with other service providers in the community cooperative and effective in serving client needs?	6. Community services; interviews with program staff from the college and service providers
Promoting Success for All Students		
7.	Are students receiving timely and accurate information about college services and programs?	7. Student surveys, interviews, and focus groups
8.	Is assessment of student skills upon entry effectively placing students in appropriate courses and programs?	8. Course grades; surveys and interviews with students and receiving instructors; analysis of comparative student success rates in courses by placement recommendation or assignment
9.	To what extent do students use various student development services? How effective are these services?	9. Student use data by service; student surveys, interviews, or focus groups; analysis of student achievement and/or goal attainment by use of services; other indicators of impact of services
10.	To what extent do students use various academic support services? How effective are these services?	10. Student use data by service; student surveys, interviews, or focus groups; analysis of student achievement and/or goal attainment by use of services; other indicators of impact of services
11.	How well has the college anticipated barriers to student success and provided an effective programmatic response?	11. Inventory of special services offered to students; student-use data; student surveys, interviews, and focus groups
12.	Does the campus climate encourage and support success for all groups of students?	12. Data on student involvement in campus life; student surveys, interviews, and focus groups; comparative analysis of survey results by student characteristics
13.	Do college professional and staff development programs assist in developing an appreciation for the value of diversity? Do they assist in providing skills in working with diverse student populations?	13. Analysis of staff and professional development programs

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Issues in Assessing Institutional Effectiveness

The move toward formal, outcomes-based programs for assessing institutional effectiveness is a relatively new development for institutions of higher education. Demands that community colleges implement assessment programs raise a host of issues, particularly as this approach is quite different in focus from assessments previously required by accrediting bodies or government agencies. This chapter attempts to address many of these issues; the discussion is organized in the question and answer format.

Questions and Answers

Should community colleges respond to requests for documentation for institutional effectiveness?

Community colleges have an obligation to respond in a positive manner to reasonable requests for measures of institutional effectiveness. Examples of these include 1) measures to be used internally for improvement of programs and services, 2) measures to be used by government agencies for regulatory functions, 3) measures to be used by the public and students in making decisions as consumers, and 4) measures to be used by regional accrediting agencies. Accrediting agencies traditionally emphasize process and include faculty credentials, facilities, library collections, financial resources, and operating efficiency but are now increasingly requesting outcomes measures.

On occasion, institutions will be faced with unreasonable requests for information, or for inappropriate information. In these cases, rather than refusing to comply, institutions should suggest alternative information that is both reasonable and accurate.

Is assessment the same as evaluation?

The term assessment is often mistakenly used interchangeably with evaluation and measurement. Assessment is essentially the process of gathering data or measures and assembling them in some understandable form. Once gathered, judgments or evaluations may be made on the basis of the evidence. Measurement is only part of the process of assessment, and evaluation implies judgments based upon the collated measures.

Can community colleges be evaluated by a single measure?

The complexity of the community college requires multiple measures of effectiveness. No single measure can describe an institution's effectiveness; measures viewed in isolation may result in a very inaccurate and potentially damaging perception of institutional effectiveness. For example, degrees awarded is one reasonable indicator of institutional effectiveness at four- year colleges and universities. However, in community colleges, where a majority of students are not pursuing degrees or certificates, it is certainly not a sole criterion. This measure, by itself, gives the perception that, by comparison, community colleges are not as effective as four-year colleges. This ignores how many students are meeting their individual goals, such as upgrading job skills or preparing for transfer to other institutions. Such a measure also fails to reflect the impact the college has on its community and the economy. Thus, single measures are measures out-of-context and misrepresent the effectiveness of the institution as a whole.

Are there general criteria that should be applied when selecting measures?

The measures selected as indicators of institutional effectiveness must be practical and relevant to the mission of the college. Institutions need to resist the temptation to use measures simply because they are easily obtained. The fact that the outcomes of certain college programs and services are difficult to measure does not diminish their importance. Colleges should continue to seek means to demonstrate effectiveness in performing their clearly identified missions.

The measures selected should have a reasonable chance of contributing to the improvement of institutional effectiveness. Many possible measures can be identified, but institutions will not have the resources to collect all of them. Those selected, by either external agencies or college personnel, should be those most relevant to the institution and its community, as well as those that can lead to improvements in teaching, learning, and the delivery of services to students.

Will access to the community college be affected by an emphasis on institutional effectiveness?

A danger of the move toward outcomes assessment and accountability is that colleges could inadvertently lose sight of some of their important missions in the quest to demonstrate institutional effectiveness. One of the easiest ways to raise success rates of students would be to limit acceptance of high-risk students into the college. This, however, would directly contradict access to nontraditional students, which is a priority goal of most community colleges. The Report of the Commission on the Future of Community Colleges (1988) urges that caution be exercised to insure that outcomes assessment and accountability do not become synonymous with a new elitism. For this reason, consideration of the access mission, along with the four core educational missions of most community colleges, is critical to the overall assessment of institutional effectiveness.

How much data is enough to demonstrate institutional effectiveness?

This is a difficult question to answer. The college's primary role is to provide services to constituents. Programs for measuring institutional effectiveness should not become ends in themselves, but rather should become an ongoing process for institutional improvement. Two criteria can be applied to this determination:

1. The effort and expense involved in collecting and disseminating measures of institutional effectiveness should not be greater than the benefits to be received as a result of the measurement. Each measure to be used should be considered against this criterion. Of course, this can be a difficult judgment to make, and such discretion can be limited by mandates from external bodies.
2. Information collected should facilitate decision-making and be relevant to decisions the institution is prepared to make. Collecting information only because it would be "nice to know" should be avoided. In this regard, institutions and external agencies should require specific plans for the utilization of each measure prior to requesting its collection.

Who should be involved in identifying the measures used to assess institutional effectiveness?

The focus should be on overall institutional effectiveness, not the success of

individual departments or divisions; therefore, to the extent possible, a wide range of staff from throughout the institution should be involved. The commitment must begin with the chief executive officer. Staff and faculty must see that the institutional commitment is real in that top administrators sincerely value these activities as important to the institution. The institution needs to internalize the importance of demonstrating institutional effectiveness and accept it as a legitimate, self-imposed institutional function—not as a onetime examination, but rather as an ongoing, valuable institutional enterprise.

Determining the specific measures to be used should be a joint function. Faculty and staff often feel that others in the institution do not fully understand their programs and cannot effectively establish the appropriate criteria for evaluating them. Results that indicate a need for change will be best accepted if faculty and staff are involved in selecting the measures, participate in the data collection, and help interpret the results. Thus, the active participation of the faculty and staff is essential to the success of any assessment of institutional effectiveness. If planning, data collection, and the use of results are mandated from above, the process is bound to fail.

Institutional researchers play a key role in assisting faculty and staff in identifying the measures and in collecting relevant data. In the ideal situation, however, the final responsibility for identifying appropriate measures and using the results rests with the faculty and staff who provide the programs and services.

Who are the major audiences for data assessing institutional outcomes?

Different aspects of institutional effectiveness data will be of interest to various concerned parties, including college administrators, faculty and staff; board members; legislators and staff in state coordinating or governing boards; regional, state and professional accrediting organizations; foundations and other funding agencies; and the general public.

Internal audiences, including administrators, faculty, and staff require the results of outcome assessment to guide program improvements. Members of boards of trustees have similar informational needs to insure that programs are designed and implemented as effectively as possible. External audiences, especially legislators and state officials, will use assessment results in making policy decisions.

Another key audience is current and potential students and, when appropriate, their parents. The results of outcomes assessments for each mission should be made available to these constituents as consumers and sponsors of college programs. Of course, this audience tends to be particularly interested in information regarding the specific programs in which they are considering enrolling. Those intending to prepare for transfer to a four-year college or university want to know the success rates of previous students with similar intentions, and those exploring career programs are interested specifically in the placement rates and initial salaries earned by graduates of the program. Community colleges have a special obligation to provide complete and accurate information to this audience.

Recipients of program graduates also have a keen interest in the results of outcome assessments. In particular, employers and others in local business, industry, and labor will want to know the level of preparation they can expect of those who complete career programs, various courses, or continuing education training. Transfer institutions want to know both the level of preparation they can expect of entering students and their rates of success completing baccalaureate

degree programs.

Finally, members of the community at large are an important constituency for outcomes information. Their interest will be the most broad-based, though assessment results can be critical in maintaining their continuing support for the college.

How should assessment data be used?

The purpose for determining measures of effectiveness should be prescriptive, not punitive. This will reduce resistance to collecting and using assessment results. If participants in the assessment process understand that the purpose is to improve, rather than to penalize individuals or programs, the chance that the results will be accepted and used appropriately is much greater.

Assessment results should certainly not be used as part of faculty evaluation, nor as a barrier for the advancement of students to higher levels of learning. The determination of institutional effectiveness should never become a process that mitigates against faculty and student involvement. Neither should outcomes be used to rank college programs, groups of students, or institutions against one another. As convenient as it might be to compare the number of transfer students accepted from one community college to that from another, this in itself, may say more about the nature of the students entering the colleges than the effectiveness of the colleges' respective programs.

To have meaning, promote involvement, and sustain long-term value, the information-gathering process must ultimately result in aggregate benefits, not punishments, to the students, faculty, and administration of any institution.

What precautions should be taken in reporting measures of effectiveness?

Overall, colleges need to exercise particular care in reporting measures of institutional effectiveness to external agencies. The equivalent of Murphy's Law for institutional researchers is that if data can be misunderstood, it will be. The corollary is that if data can be misused, it will be (even if inadvertently).

Some measures are potentially harmful to groups of students if not handled sensitively. For example, cumulative grade point averages of transfer students are not generally comparable across institutions. Further, minority students as a group traditionally have fared poorly on standardized assessment instruments when compared to nonminority students. If results not favorable to subgroups of students are widely reported and subject to misinterpretation, they may lead to reinforcing of stereotypes and be counterproductive to improving institutional effectiveness.

Even when individuals are well-intentioned, misinterpretation and misuse can occur. Educating agency personnel on interpretations, uses, and limitations of the data is a critical part of the dissemination process. Agencies requesting the information have an obligation to use it responsibly. Likewise, colleges have an obligation to provide data in a manner that allows agencies to use it responsibly.

Who should pay the costs of assessing institutional effectiveness?

The costs of collecting and disseminating measures of institutional effectiveness should not be greater than the benefits to be received as a result of the measurement. The costs of conducting programs for measuring institutional effectiveness should not necessarily fall on the college. If the benefit is primarily to the institution, as a form of self-assessment leading to improvement of services, the

cost should be borne primarily by the college. However, if the request originates from a state board, accrediting body or other external agency and is primarily for regulatory purposes, those agencies should consider funding those assessments.

In some cases an external agency may fund measures of institutional effectiveness that are, in the opinion of college personnel, inappropriate. The institution should not automatically gather the measures just because it can receive funds to do so. The criteria of usefulness and appropriateness should be applied in determining whether to accept such funding. If the measures are deemed inappropriate, the college might propose other measures that are more suitable.

In Conclusion

A combination of systematically gathered and reported data along with reasonably stated goals and processes to achieve the goals can provide invaluable help for community colleges to demonstrate their accomplishments to themselves and their constituencies. They will be able to deflect criticisms based upon measures or comparisons that are not compatible with the missions of community colleges. The straightforward approach recommended in this monograph can contribute to better understanding by significant college constituencies of the complex and appropriate role that community colleges play in the overall educational system. The approach should also result in the gathering and reporting of information that is educationally meaningful and useful to students, faculty, and administrators.

If properly planned and implemented, with appropriate faculty and staff involvement at all levels, ongoing institutional effectiveness assessment can be an integral part of a comprehensive program of institutional improvement. Using effectiveness data in a formative way to improve programs may ultimately prove to be the most important use of outcome measures. The same data can be used to respond to various external demands to demonstrate institutional effectiveness.

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Appendix A
A Guide to Selected Resources

This appendix serves as a guide to resources for implementing an institutional effectiveness assessment process. It also contains a list of suggested readings and resources which provide detailed information on specific methodologies.

Suggested Readings and Resources

Assessment of Institutional Effectiveness

Adelman, Clifford (Ed.). *Performance and Judgment: Essays on Principles and Practice in the Assessment of College Student Learning*. Washington, D.C.: United State Department of Education, Office of Research. (Undated).

Alfred, Richard L. and Vincent P. Linder. *Rhetoric to Reality: Effectiveness in Community Colleges*. Ann Arbor, Michigan: Community College Consortium, 1990.

Banta, Trudi (Ed.). *Implementing Outcomes Assessment: Promise and Perils*. New Directions for Institutional Research (Report No. 59). San Francisco: Jossey-Bass, Inc., 1988.

Bray, Dorothy and Marcia J. Belcher (Eds.). *Issues in Student Assessment*. New Directions for Community Colleges (Report No. 59). San Francisco: Jossey-Bass, Inc., 1987.

Cameron, Kim. *Measuring Organizational Effectiveness in Institutions of Higher Education*. Boulder, Colorado: National Center for Higher Education Management Systems (NCHEMS), 1978.

————. *Critical Questions in Assessing Organizational Effectiveness*. Boulder, Colorado: National Center for Higher Education Management Systems (NCHEMS), 1980.

————. *Domains of Organizational Effectiveness in Colleges and Universities*. Boulder, Colorado: National Center for Higher Education Management Systems (NCHEMS), 1981

Commission on Colleges, Southern Association of Colleges and Schools. *Resource Manual on Institutional Effectiveness*. Atlanta: Southern Association of Colleges and Schools, 1987.

Ewell, Peter T. (Ed.). *Assessing Educational Outcomes*. New Directions for Institutional Research (Report No. 47). San Francisco: Jossey-Bass, Inc., 1985.

———— and Robert P. Lisensky. *Assessing Institutional Effectiveness*. Boulder, Colorado: National Center for Higher Education Management Systems (NCHEMS), 1988.

Halpern, D.F. (Ed.). *Student Outcomes Assessment: What Institutions Stand to Gain*. New Directions for Higher Education (Report No. 59). San Francisco: Jossey-Bass, Inc., 1982.

Jacobi, Maryann, Alexander Astin, and Frank Ayala, Jr. *College Student Outcomes Assessment*. ASHE-ERIC Higher Education (Report No. 7). College Station, Texas: Association for the Study of Higher Education, 1987.

Rossman, Jack E. and Elaine El-Khawas. *Thinking About Assessment: Perspectives for Presidents and Chief Executive Officers*. Washington, D.C.: American Council on Education and American Association for Higher Education, 1987.

Terenzini, Patrick T. "Assessment with Open Eyes: Pitfalls in Studying Student Outcomes," *Journal of Higher Education* (November/December 1989).

Focus Groups

Drueger, Richard A. *Focus Groups: A Practical Guide for Applied Research*. Newbury Park, CA: Sage Publications, 1988.

Templeton, Jane Farley. *Focus Groups: A Guide for Marketing and Advertising Professionals*. Chicago: Probus Publishing Company, 1987.

Interview Techniques

Bradburn, Norman M. *Improving Interview Method and Questionnaire Design*. San Francisco: Jossey-Bass, Inc., 1981.

Research/Evaluation Methodology

Gray, Peter J. (Ed.) *Achieving Assessment Goals Using Evaluation Techniques*. New Directions for Higher Education (Report No. 67). San Francisco: Jossey-Bass, Inc., 1989.

Kerlinger, Fred N. *Foundations of Behavioral Research*. New York: Holt, Rinehart, and Winston, Inc., 1964.

Patton, Michael Quinn. *Qualitative Evaluation Methods: A Basic Guide*. Beverly Hills, CA: Sage Publications, 1977.

————. *Utilization-Focused Evaluation*. Beverly Hills, CA: Sage Publications, 1978.

Rutman, Leonard (Ed.). *Evaluation Research Methods: A Basic Guide*. Beverly Hills, CA: Sage Publications, 1977.

Slonim, J.M. *Sampling in a Nutshell*. New York, NY: Simon and Schuster, 1960.

Webb, Eugene J., et al. *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. Chicago: Rand McNally College Publishing Company, 1966.

Weiss, Carol. *Evaluation Research Methods: Methods of Assessing Program Effectiveness*. Englewood Cliffs, N.J.: Prentice Hall, 1972.

Statistics

Garrett, Henry E. *Statistics in Psychology and Education*. New York: David McKay Company, Inc., 1966.

Guilford, J.P. *Fundamental Statistics in Psychology and Education*. New York: McGraw-Hill Book Company, 1956.

Siegel, Sidney. *Non-Parametric Statistics for the Behavioral Sciences*. New York: McGraw-Hill Book Company, 1956

Survey Methodology

Berdie, Doug R., et al. *Questionnaires: Design and Use*. Metuchen, N.J.: The Scarecrow Press, Inc., 1986.

Dillman, Don A. *Mail and Telephone Surveys: The Total Design Method*. New York: John Wiley and Sons, Inc., 1978.

Oppenheim, A.N. *Questionnaire Design and Attitude Measurement*. New York: Basic Books, Inc., 1966.

Standardized Tests and Surveys

Academic Profile II
Educational Testing Service
Rosedale Road
Princeton, NJ 08541
(609) 921-9000

The ACT Assessment Program
American College Testing Program
2201 N. Dodge Street
Iowa City, IA 52243
(319) 337-1000

The ASSET Program
American College Testing Program
(See above.)

College Level Examinations Program
The College Board
45 Columbus Avenue
New York, NY
(212) 713-8000

College Outcome Measures Programs
American College Testing Program
(See above.)

Collegiate Assessment of Academic Proficiency
American College Testing Program
(See above.)

A Guide to Selected Resources

Sequential Tests of Educational Progress, Series III
CTB/McGraw-Hill
2500 Garden Road
Monterey, CA 93940
(800) 538-9547

Stanford Test of Academic Skills
The Psychological Corporation
555 Academic Court
San Antonio, TX 78204
(512) 299-1061

Specific Skills Cognitive Instruments

ACT Proficiency Examination Program
American College Testing Program
2201 N. Dodge Street
Iowa City, IA 52243
(319) 337-1000

Advanced Placement Program of the College Entrance Examination Board
The College Board
45 Columbus Avenue
New York, NY
(212) 713-8000

College Board Achievement Tests
The College Board
(See above.)

English Composition Test
The College Board
(See above.)

Nelson-Denny Reading Test
Riverside Publishing Company
8420 Byrn Mawr Avenue
Chicago, IL 60631
(800) 323-9540

Writing Proficiency Program
CTB/McGraw-Hill
(See above.)

Noncognitive Instruments

Alumni Survey (2-Year College Form)
American College Testing Program
2201 N. Dodge Street
Iowa City, IA 52243
(319) 337-1000

The Community College Goals Inventory
Educational Testing Service
Rosedale Road
Princeton, NJ 08541
(609) 921-9000

Entering Student Survey
American College Testing Program
(See above.)

Program for Self-Assessment Service
Educational Testing Service
(See above.)

Student Opinion Survey (2-Year College Form)
American College Testing Program
(See above.)

The Student Instructional Report
Educational Testing Service
(See above.)

Student Reactions to College
Educational Testing Service
(See above.)

Survey of Academic Advising
American College Testing Program
(See above.)

Withdrawing/Nonreturning Student Survey
American College Testing Program
(See above.)

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Appendix B
Using Standardized Assessment Instruments

A principal concern in higher education assessment is that the tests and the results they yield be used properly. Proper test use involves a range of concerns, both technical and practical. This appendix identifies and comments on major elements that an institution should consider in selecting and using a test to assess institutional outcomes to help create a more effective institution.

To be reiterated is that testing is *only* one method of assessing effectiveness. Successful assessment includes other methods such as interviews, surveys, and case studies. Further, the adoption and use of tests require careful planning, administration, and interpretation. The following points are guidelines for organizing a testing program.

Quality of Data

Providing sufficient lead time

A major cause of failure in assessment endeavors is trying to complete all of the steps in a two to four-week period of time. To lay an adequate foundation for success, an institution should expect to spend at least four to six months prior to the administration of any instrument. In numerous instances, individuals have made quick decisions and subsequently have achieved no meaningful results from testing. In fact, attempting to move the process along too quickly and without appropriate collaboration often endangers the assessment effort.

Selecting an adequate sample

A question commonly asked is "What constitutes an adequate sample?" Unfortunately, no simple formula exists for determining a sample. When test data are not representative of the student population because a biased sample was chosen or resulted, or because only data from volunteers were collected, the value and meaning of the group data are highly questionable. Institutions that do not require testing of the full group of students must select their sample carefully or run a significant risk of obtaining data of limited quality. One should consult a good text on this topic (e.g., *Sampling in Education and Social Sciences* by Richard M. Jaeger) and perhaps contact a representative from a testing company for advice.

Generally speaking, the greater the number of students tested, the more accurate the results will be. In terms of raw numbers, institutions should test at least 100 students for each type of test used. Further, a determination should be made if the students to be tested will be randomly selected or whether other variables will be used in selecting students (e.g.,freshmen, freshmen with majors declared in business, sophomores who have transferred and/or earned all of their credits at a single institution, all students in classes being held at a specific time, all students in specific classes, etc.). Appropriate sampling is important if the results are to be of maximum value to the institution.

Student participation and effort

One of the critical problems in assessment is securing appropriate and effective participation of students. If students do not take the assessment effort seriously and do not put forth their best effort, the data, at least for those students, are of little or no value. Solving both of these problems is not easy and no quick or universal solutions are available. Getting and keeping student cooperation is serious and difficult work but essential for successful assessment.

Student committees can help identify the best ways to insure student participation. Some possibilities include: 1) requiring participation in order to enroll, register for classes, or graduate; 2) offering a chance in a drawing for a VCR or CD player; 3) giving away coupons for pizza, tee shirts acclaiming their participation, or tickets for cultural/sporting events; 3) appealing to their altruism and getting them to participate because it will help their school do a better job.

Persuading students to take the test seriously and do their best is not as easily addressed. Unless a minimum score is required to move to another education level, there is no compelling incentive to do well. An exam that is challenging can increase motivation. Also, a faculty that enthusiastically supports the assessment efforts can influence student performance. Support of student leaders and organizations is also helpful.

Spot checking student exam performance and test scores is useful in assessing how seriously the students took the exam. A brief questionnaire may be distributed to students to determine whether they

took the test seriously and did their best. Moreover, student exit interviews can be helpful in this matter. Institutions must be sensitive to the motivation issue in all assessment efforts that require student participation.

Interpreting Results

Avoiding misuses of data

Interpret test results carefully and avoid misuse of data. Standardized tests are typically constructed very carefully. They can provide reliable and valid information if used correctly. Guidance on the correct use(s) of standardized tests is readily available from testing companies. If an institution follows this advice, it will generally avoid misuse of the results.

A program assessment model will not necessarily allow institutions to make decisions about individuals. For example, flexible sampling models can be very useful for program assessment but do not necessarily provide individual assessment data. On the other hand, if testing is implemented to obtain valid individual results, these results will be viable for program evaluation.

Scores based on subtests may be desirable for program evaluation. However, subscores should be used with great caution unless they are shown to be reasonably reliable. In other words, there should be sufficient numbers of items within each subscore area to provide stable information (e.g., a minimum of approximately 20-25 items for any subscore area). Nevertheless, subscores should be considered primarily as indicators of areas for further evaluation.

Value added

There is great interest in using test results to establish the "value added" by an educational program. This is usually approached using residual scores, which are the difference between pre- and post-test results. While appealing in concept, institutions using such approaches should be aware of the effects of reliability on the quality of the judgment possible. (For example, the statistical phenomenon "regression toward the mean" is important in value added approaches. Simply stated, regression toward the mean is the tendency for those with lower scores to get higher scores on retesting and those with higher scores to get lower scores. Controlling for differences in ability levels through a more sophisticated statistical technique, e.g., analysis of co-variance, may be required.

In addition, norm-referenced scores assume that movement anywhere on the scale is equal. This assumption may mask real gains within a test-retest situation. For example, students who increase their basic arithmetic ability will appear in a norm-referenced comparison the same as students who improve their performance in basic algebra, if both are covered on the same test.

Limitations of standardized tests

While standardized tests have many benefits—objectivity, high reliability, demonstrable validity, low cost, ease of administration, efficient and effective coverage of large amounts of material in a limited time period—they are not a panacea and should not be the sole means of assessment. Other kinds of assessments—essay tests, survey results, performance data—should be used along with or instead of objective instruments when they can improve the quality of the assessment. Critical decisions about individuals or programs should not be made on the basis of test results alone.

Selecting Testing Instruments

Matching tests to goals

Instruments are selected based on institutional goals. These goals need to be stated in a measurable way. If they are not, restating them is a worthwhile exercise. Even if they are stated in a measurable way, they may need fine tuning before selection of testing instruments.

Involving faculty

A committee approach for instrument selection is often effective. The committee can contact the various testing companies for details about their instruments and then match the test objectives with their institutional goals. The number of commercial tests available (see Appendix A) is relatively small, so this review of standardized options can be completed in a reasonable period of time. Publishers provide considerable detail on each test. Some companies even make review copies of actual tests available if stringent security precautions are met. There is some overlap among the tests offered by the various companies, so selection may be made not only based on objectives covered, but also on services provided.

If, after a review of commercial tests, no tests are found to be appropriate, an institution should develop its own instruments. Usually, however, commercial tests can meet at least some of the local assessment needs, so institutions can direct their efforts to supplementing what is available.

Normative and comparative data

Most test scores are "norm" referenced; that is, the scores derive meaning in comparison to the scores of others. How fast a runner can run the 100-yard dash is usually interpreted against how fast others run the same distance. Many different comparisons are possible. Typical comparisons include: 1) comparison with others at the same institution, 2) comparison with those at other institutions, and 3) performance of the same individuals over time. Norms are difficult to obtain and maintain and, if available for an outcome measure, should be reviewed carefully for appropriateness.

Criterion-referenced

Unlike norm-referenced scores, criterion-referenced scores have meaning in and of themselves. For example, one either meets or fails to meet the criteria for a life saver's certificate. While comparative data can be generated to support use of criterion-referenced scores, it is not necessary for the criterion-referenced data to have meaning. What is important in the use of criterion-referenced data is that the data deal with information of importance and utility to the institution.

Validity

Perhaps the most critical aspect of test use is that a test be valid for the intended use. For example, is it designed to measure the institution's goals? An instrument can be highly valid for one purpose and be totally invalid for another. Validity can be conceived of in several different modes. All are important but for most outcomes assessment purposes, content and construct validity are most critical.

A test is content valid when it covers adequately the content to be measured. In the case of outcomes measures, the test or instrument should cover what an institution is teaching and seeking to accomplish through its educational program.

Construct validity refers to the extent to which a test measures the theoretical construct it is intended to measure. Construct validity is typically demonstrated through an accumulation of research results, such as factor analysis, studies of scores of students who have experienced what is being tested versus those who have not, and correlations with practical criteria and with other tests of the same construct.

Reliability

Reliability is the consistency or accuracy of the measure. Can the results be counted on to be the same over repeated measures? Or, must one expect a great deal of variation in scores obtained from the same individuals at different times? A number of factors determine the reliability of a test—length, internal consistency, relationship of item performance to scores— and the level of reliability required varies with the use to which the scores will be put.

Scores used to make nonreversible decisions about individuals (e.g., admission to a nursing program) must be much more reliable than scores used to suggest areas of interest, for example. Similarly, scores that are reliable for a group may not be, and may not need to be, reliable for individuals.

No test is perfectly reliable. All involve measurement error. This error comes from a number of sources—some internal to the test and some external. It is important in using test results for assessment purposes that users recognize the imperfection of any measure. When comparisons are made, results should be discussed in terms of either ranges or probabilities of the score distributions overlapping.

Conclusion

The success or failure of using standardized instruments in assessing institutional effectiveness depends upon a variety of factors. If these factors are considered carefully, the chances of achieving success are increased greatly. However, there is no magic formula that can be applied universally. An approach that provides adequate lead time and involves as many faculty, administrators, and students as possible in the whole process (planning, implementation, and evaluation) will be well on the way to attaining good results.

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